DOCUMENT RESUME

ED 025 973 FL 001 058

By-Das Gupta, A.K., Ed.
Indian Educational Material; Annotated Quarterly Bibliography, Vol 2 No 1: September 1967.
Indian National Scientific Documentation Centre, Delhi.; National Science Foundation, Washington, D.C.
Spons Agency-Office of Education (DHEW), Washington, D.C.
Report No-TT-68-50601-1
Pub Date Sep 67
Note-113p.
EDRS Price MF-$0.50 HC-$5.75
Descriptors-Academic Achievement, *Annotated Bibliographies, Curriculum, Educational Philosophy, Educational Psychology, *Educational Research, Guidance Counseling, Higher Education, Instructional Materials, International Education, *Program Descriptions, Public Schools, Rural Education, School Administration, Teacher Education, *Teaching Methods, Testing, *Units of Study (Subject Fields), Vocational Education
Identifiers-*India

Descriptions of special programs and research efforts in the schools of India during the period July-September, 1967 are presented in this bibliography of over 200 items with abstracts. Materials cover different levels of education: adult, basic, higher, general, elementary, secondary, part-time, rural, and special education. Also treated are student-related concerns (disciplinary problems, student selection, and study abroad) and teacher education (status and method). Such administrative problems as curriculum, economics and finance, evaluation, planning and policy, school forms, instructional materials, statistics, testing, and socioeconomic status are discussed. Attention is given to educational psychology, research, and academic achievement and to the subject fields of reading, science, social education, vocational education, guidance, and health. There is a special section on Indian language problems and education and a list of the periodicals and newspapers abstracted. For a related document see ED 016 168. (DS)

ED0 25973

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TT68-50601/1

INDIAN EDUCATIONAL MATERIAL

[Period Covered July-September 1967]

Vol 2 No 1
September 1967

FL 001 058

INDIAN NATIONAL SCIENTIFIC DOCUMENTATION CENTRE, DELHI-12

TT 68-50601/1

INDIAN EDUCATIONAL MATERIAL

annotated quarterly bibliography

Vol 2 No: 1 September 1967
[Period Covered : July - September 1967]
(Abstract nos. 1-162)

Contains a Special Section

Indian Language Problem and Education
1. Official Documents 1948-1967
(Abstract nos. A1-A43)

Editor
A.K. DAS GUPTA

Associate editors	Assisted by
A. JOSEPH	V.N. BALAMBAL
V.N. KUSUMA	G.R. PARKHI
R.S. SHEDHA	C.V.N. SWAMY
V. SUJATA	

Compiled and Published for
The Office of Education of the Department of Health,
Education and Welfare in accordance with an agreement
with the National Science Foundation, Washington D.C.,
by the Indian National Scientific Documentation Centre,
Hillside Road, Delhi-12, India.

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ACADEMIC ACHIEVEMENT

1 BHATNAGAR R P: Intellectual factors as predictors of academic achievement - a review of research. Education & Psychology Review 1967, 7(3), 166-73; Educational Trends 1967, 2(2), 14-19. 30 ref.

Intelligence scores, school marks and achievement test scores have been considered. Following are the findings: 1) at the elementary stage mental tests alone are not adequate predictors of scholastic achievement. Other factors are social development and attitudes as reflected in drive to learn, ability to attend, perceptual ability, physical development, conceptual background and emotional stability; 2) contribution of intelligence to academic success has not been found to be high both at secondary and college levels. The general conclusion of a number of studies is that no correlation is more than 70 and hence not more than 50% of the total variance of academic success can be explained by intellectual factor; 3) of the three tests - verbal intelligence, arithmetic and English - verbal intelligence test has been the best predictor of success in grammar schools. The variance covered by this factor is only about 25%. Arithmetic and English achievements show still lower correlations and explain only 10% of the variance of scholastic success; 4) school marks can predict success in school examinations only to a limited extent and it has in no case been possible to obtain a correlation higher than .70. It has been concluded that academic performance should be considered as a composite criterion and not a unitary one and that several non-intellectual factors are also associated with academic achievement.

2 LALITHAMBA U S: Study of achievement in mother-tongue with reference to achievement in English and Mathematics. Journal of the College of Education, Karnatak University 1967, 5(1), 4-6. 1 ref.

A sample of 165 boys and 141 girls from standard IX of three high schools of Dharwar was subjected to the study. The marks obtained in Kannada, English and mathematics in the annual examination of standard VIII were taken as the achievement score in each subject. The conclusions are: 1) significant correlation exists between mother-tongue and English and between mother-tongue and mathematics regardless of sex difference; 2) superior performance in Kannada indicates the possibility of similar performance in English as well as mathematics; 3) those who do well in Kannada but not in English and mathematics need special attention. Under proper diagnostic and remedial programme they could show rapid progress because they have the potential for better performance.

3 LELE T P: Comparative study of the students from different communities. Education & Psychology Review 1967, 7(3), 117-24.

The object was to study the comparative achievements of students from backward classes, scheduled castes and scheduled tribes and of students belonging to other communities reading in the degree courses of the Faculty of Technology and Engineering and in the diploma courses in the Polytechnic (M.S. University of Baroda). The break-up of the sample studied is: 1) backward classes : Degree courses : 35, Diploma courses : 57; 2) other communities : Degree courses : 30, Diploma courses : 104. The students were divided into different categories on the basis of the marks obtained in Secondary School Certificate Examination / Preparatory Science Examination. Their achievements at various examinations were studied noting particularly the number of failures and their achievements at the Final Year Diploma and Degree Examination. The conclusions are: 1) students from backward communities who complete the diploma course compare favourably with their equivalents from other communities; 2) in the degree courses, the level of achievement of students from backward communities is significantly lower than that of their equivalents; 3) in both the courses, the wastage in years is more in the case of students from backward communities; 4) the fall in standards in these courses cannot be attributed to the admission of students from backward communities, since their number is insignificant.

4 MEHDI B: Differential factors in pupil success in science, arts and commerce courses at the higher secondary stage. Indian Educational Review 1967, 2(2), 92-104. 9 ref.

The factors studied are: verbal facility, numerical facility, verbal meaning, inductive reasoning, mechanical reasoning, perceptual speed, rote memory, spatial visualization, study habits and interest in science. The sample comprised 364 students in Science, 326 in Arts and 414 in Commerce courses, studying in 5 large representative urban schools of Delhi. Pupils entering class IX in the 3 courses were studied for 3 years in order to find out which of the factors showed a significant relationship with the ultimate success at the end of class XI. Their relationship with the success in between and at the end of classes IX and X was also studied for comparison and for noting the stability of factors found significantly related to pupil success at the end of class XI. The conclusions are: 1) combinations of factors required for success in the three courses show appreciable differences, both in kind and in degree. Thus, while Inductive Reasoning assumes the greatest importance for the Science course, Verbal Meaning turns out to be the best single predictor for Arts and Commerce courses, the magnitude being the highest for the Arts course. The second best predictor for Science is Verbal Meaning; for Arts, Numerical Facility; and for Commerce, Verbal Facility. A combination of two factors in each case seems to provide the best multiple correlation; 2) of the 8 ability tests only 3, viz, Verbal Meaning, Inductive Reasoning and Numerical Facility seem to be important; 3) study habits and interest, when measured by inventories of the type included in this study, (Brown, W.F. and Holtzman, W.H. Survey of Study Habits and Attitudes. N.Y., Psychological Corp. 1953. P.S.M. Interest Inventory. Prantiya Shikshan Mahavidyalaya, Jabalpur, 1959.) do not seem to contribute significantly to prediction of academic achievement; 4) better prediction is possible for those subject areas with which the pupils had longer acquaintance. This is in agreement with previous findings which have shown that cognitive skills are acquired in relation to subject-matter fields and not as skills that could be generally applied. (Furst E J. Journal of Experimental Education 1950, 18, 343); 5) when academic criteria are involved, differential prediction with the help of differential aptitude tests is not a very promising approach; 6) the assumption made by many counsellors and guidance workers that a significantly higher level of general mental ability is required for success in the Science course than in Arts and Commerce courses, at least at the higher secondary stage, is of doubtful validity.

5 **MEHTA P**: Level of n Achievement in high school boys. Indian Educational Review 1967, 2(2), 36-70. 22 ref.

Reports the results of a survey of n Achievement (need for achievement) in high schools boys. The thematic apperceptive instrument consisted of six pictures. A sample of 975 boys studying in Class IX, drawn from 32 Delhi higher secondary schools were involved in the survey. The findings are: 1) The n Ach level seemed well comparable with that of German and American boys; 2) the location of schools appeared to produce no significant difference in the n Ach level; 3) the better known schools, with better and/or more educational facilities, show higher academic achievement than other schools, but pupils from higher socio-economic status (SES) schools did not show higher achievement motivation than those studying in lower SES schools with lesser educational facilities; 4) fathers' SES showed no relationship with the n Ach level; 5) no difference was found in the n Ach levels of boys from different income groups; 6) fathers' or guardians' educational levels (EL) showed a significant relationship with the subjects' n Ach levels. But the n Ach did not increase with the increase in the father's

EL. Boys whose fathers had low education showed higher n Ach levels than those whose fathers were educated up to the secondary level; 7) boys whose fathers were following some semi-professional vocation showed consistently higher mean n Ach level; 8) both the fathers' EL and occupational status tended to have an important bearing on the n Ach; 9) high positive correlation, between the fathers' EL and occupational groups was noticed; 10) the highest mean n Ach of 8.02 was obtained by 12-year-old boys. The mean scores show a V-shaped curve. However, an analysis of variance test revealed a non-significant value of 1.45; 11) correlations of n Ach with marks in school subjects were significant; 12) n Ach also showed a positive correlation with intelligence.

6 PATIL B R: Some factors associated with achievement in high school mathematics. Journal of the College of Education, Karnatak University 1967, 5(1), 18-20.

A study is aimed at investigating the relationship between achievement in optional mathematics and the 6 factors: viz, 1) private coaching; 2) health; 3) guidance from parents; 4) quality of teaching; 5) interest; and 6) economic condition of students. A sample of 236 students (37 girls) of class X from 4 high schools in Dharwar was administered a questionnaire covering the above aspects. The performance of the subjects was decided by the marks obtained in the previous annual examination. The findings are: 1) about 78% of successful candidates reported their interest in mathematics, while 50% of the students who are below average indicated their lack of interest in the subject; 3) about 35% reported that good teaching was helpful for their success, and about 44% attributed their poor performance to bad teaching; 4) most of the students who secured more than 50% marks were benefited by guidance in home and 27% attributed their failure to lack of such guidance; 5) private coaching did not contribute much to good performance; 6) ill-health affected 10% of the unsuccessful students; 7) while very high achievement (70% marks) has no close relationship with parent's income, very low achievement (35% marks) is related to low income of parents; 8) percentage of failure generally decreases with increase in income.

7 PATIL V D: Sibling status and academic achievement. Journal of the College of Education, Karnatak University 1967, 5(1), 25-7. 2 ref.

A sample of 220 first-born and 180 last-born boys was drawn from 10 high schools in the Hubli-Dharwar Corporation area (Mysore State) for the study. The academic achievement was computed from the scores in mathematics, English and general science. The class teachers were asked to indicate their opinion about the academic performance of the students on a five-point scale. The statistical findings which did not differ widely from the opinions of teachers are:

1) some relationship was noticeable between sibling status and academic achievement in general science; 2) sibling status had no influence on academic achievement in major subjects like English and mathematics.

8 RAINA T N: Some factors associated with high science achievement. Education & Psychology Review 1967, 7(2), 56-69. 23 ref.

Saxena's General Science Achievement Test (Manual of directionfor general science achievement test. Allahabad, Kitab Mahal, 1960; Indian Journal of Educational Administration 1960. 73-6) was administered to a sample of 375 class IX students (urban boys 38.93%, rural boys 37.87%, and urban girls 23.20%) from 8 higher secondary schools in Punjab. The top 100 students were selected as high achievers. The findings are: 1) significant relationship exists between the high achievement and the selected factors (viz., abstract reasoning, verbal intelligence, numerical ability, personality adjustment, socio-economic status, study habits, class marks, and age) except age; 2) although these 7 factors are consistently and significantly related to high achievement, the prognostic value of the correlates is not high enough to warrant selection to science courses for high achievement on one factor alone; 3) four factors viz., abstract reasoning, verbal intelligence, numerical ability, and personality adjustment give as good a prediction as all the 8 factors put together; 4) the other 4 factors, viz., socio-economic status, study habits, class marks, which are otherwise considered important correlates of academic achievement, do not show any significant promise for their inclusion in the battery of selection measures for high achievement in general science.

9 SHAH B P: Scholastic backwardness in children. Bombay Hospital Journal 1967, 9(2), 26-8.

Three factors causing backwardness are: 1) physical handicap and illness; 2) low intellectual capacity; and 3) emotional factors. Visual and auditory defects (subtle or pronounced) and physical illness retard pupils' progress. Hyperkinetic children are unable to concentrate adequately because of their short attention span. Children with mild subnormality constituting about 75% of all subnormal children who remain undetected at the initial stage of schooling do not show progress with the increase in course contents. Failure to detect this leads to many behaviour problems. Emotional insecurity can arise from several sources, the most common being the adverse attitude of parents. Parental coercion ignoring the gap between the child's capacity and parental expectation causes scholastic backwardness particularly in children with average or above average IQ. Unhealthy comparison between the child and his siblings or playmates is another causative factor. Adverse attitudes of teachers and classmates also interfere with children's learning ability. Children with superior IQ, reading in ordinary school, may also create behaviour problems in the absence of any challenging opportunity. Children with scholastic backwardness should have a thorough physical check-up, an estimation of intellectual capacity and a psychiatric evaluation.

10 SHIVAPPA D: Relationship between the level of aspiration and the academic achievement of high school pupils. Journal of the College of Education, Karnatak University 1967, 5(1), 7-11. 7 ref.

A sample of 200 pupils (100 girls) studying in standard IX in 6 high schools of Dharwar was subjected to the study to find out if there is significant difference in levels of aspiration between high achievers and low achievers in subjects like English, social studies, general science and general mathematics. The students were divided into two groups viz., high achievers and low achievers using the marks obtained by them in terminal examination. Level of Aspiration Coding Test was administered and the Goal Discrepancy Score was computed. The findings are: 1) no significant difference in the level of aspiration exists between high achievers and low achievers irrespective of sex; 2) high achievers and low achievers in all the subjects studied, differ significantly from school to school. The findings fall in line with those of Could and Kaplan (Journal of Abnormal Social Psychology 1940, 35,498).

ADMINISTRATION AND ORGANIZATION

11 GAIND D N, SHARMA R P: Educational and secondary school administration. Agra, Ram Prasad and Sons, 1966. 444p. 208 ref.

The following topics have been covered in 13 chapters: Chapter 1 - problem, basic concepts and principles of education; Chapter 2 - democratic administration in the Indian context; Chapter 3 - aims of secondary education; Chapter 4 - school and community; Chapter 5 - guiding principles of educational administration in a democracy; Chapters 6 & 7 - school administration in practice - the headmaster, teachers and pupils, importance and problems of discipline; Chapter 8 - curriculum; Chapter 9 - examinations; Chapter 10 - school time-table, supervision, and homework; Chapter 11 - the school plant; Chapter 12 - programme of health and physical education; Chapter 13 - administration at different levels - local, State and Centre; Appendix: human relations in school administration. The discussions are related to Indian conditions and wherever relevant reference has been made to the recommendations of various Commissions and Committees.

12 **KHAN A H:** New role of a secondary school principal. Rajasthan Board Journal of Education 1967, 3(4), 52-4.

The principal is so much overburdened with the daily administrative routine that he can hardly play his role as educational leader of the school. The educational functions which should be assigned to the principal are: 1) planning in-service programme for teachers. Teacher preparation is not complete in one-year training in teacher education colleges. Such programme should include planned meetings and conferences with teachers, research and experimentation, and encouraging teachers for further studies; 2) helping teachers in the selection and use of instructional material. He should acquaint teachers with new material and guide them in the production of new material; 3) encouraging teachers to conduct research and class-room experimentation; 4) helping new teachers to get them adjusted to the school system.

13 **SHAH A B:** Organization and functioning of universities and colleges. (In his Planning for democracy. Bombay, Manaktalas, 1967, 218-40).

The organization and functioning of universities and colleges should be periodically scrutinized and corrective measures should be adopted to achieve rapid progress in education. The manner of appointment of chancellors and vice-chancellors, composition and working of academic bodies, lack of autonomy in departments, absence of inter-departmental cooperation, hierarchy in the faculty, and administrative lapses lead to malpractices. In this context following suggestions have been made: 1) appointment of chancellor and vice-chancellor by an academic agency like University Grants Commission or a similar state-level body without government interference; 2) appointment of Deans, Chairmen of Boards of Studies etc. purely on academic merit; 3) keeping the senate to a viable size and with no representatives from trade unions, municipal bodies etc., 4) setting up a small committee charged with the task of academic development; 5) replacing the Head of the Department by a 'Chairman' functioning as a coordinator; 6) holding frequent inter-departmental and intra-departmental meetings; 7) delegating more autonomy to Departments; 8) creating separate Boards of Studies for postgraduate and undergraduate courses; 9) evaluating frequently the work of teachers; 10) providing facilities and physical amenities to college teachers equivalent to those extended to university teachers.

14 **AHMAD M**: Teaching adults to read and write - a guide book of literacy teacher. New Delhi, Ministry of Education (Govt.of India) 1967. 112p. 7 ref.

The need and methods of motivating illiterate adults to read and write have been discussed in Chapter 1. Chapter 2 gives the qualitative and quantitative definitions of adult literacy and describes the stages for achieving functional literacy. Chapter 3 discusses the steps through which the objectives of adult literacy can be achieved. They are: 1) knowing the students; 2) organizing the class properly; 3) using audio-visual aids; 4) having the necessary classroom equipment; 5) teaching effectively. The steps have been described with illustrations and examples. The faculties to be developed through effective teaching are: 1) oral expression; 2) reading speed; 3) power of comprehension and 4) writing. The progress of the students may be assessed by subjecting them to the following tests (discussed in chapter 4) : Oral - 1) quick recognition of known words; 2) recognition of new words; 3) speed of reading; Written - 4) rate of comprehension; 5) speed of writing. The ways and means of relating literacy teaching to everyday life have been discussed in Chapter 5.

15 **BHOLA H S**: Research in adult literacy. Indian Journal of Adult Education 1967, 28(7), 5-9. 22 ref.

The research studies done in India may be grouped under 3 broad categories: 1) problems of adult literacy; 2) studies in communication, innovation, diffusion and community development wherein literacy is a variable; 3) studies in the foundational disciplines of rural sociology, anthropology, political processess and economics which contribute to adult literacy research area through developmental type studies. In the light of the review of these research studies steps needed for promotion of research are: 1) creation of institutional and procedural arrangements for developing one of the existing institutions into an information storage and retrieval centre for research in adult literacy; 2) utilizing various research traditions of the foundational disciplines of sociology, philosophy, history, etc. to enrich adult literacy research; 3) theoretically-oriented research; 4) developing a research paradigm to map the whole research area. One such paradigm consisting of six perspectives viz., cultural, sociological, political, economic, communication and linguistic, has been suggested.

16 BISWAS R: Some guide lines for rural adult literacy programmes. Indian Journal of Adult Education 1967, 28(7), 13-16.

Presents some observations based on experience gained in operating a project on eradication of illiteracy and to find an effective method for implementing literacy programme among women by the Women's Programme Section of Planning, Research and Action Institute, Lucknow: 1) the first step in any literacy programme should be to define literacy, objectives of the programme, and the prospective participants; 2) selection of a meaningful syllabus; 3) the women participants should be identified and classified. It should be decided first which group should be covered; 4) a door-to-door survey for identifying the prospective students; 5) creation of a favourable psychological climate in the programme; 6) short-term programmesin slack seasons is more effective; 7) selection of methods and syllabus requires orientation towards the needsof the participants, their motivation and educational level and availability of instructional material and aids; 8) detailed planning of the implementation procedures including periodical and final test should be finalized before introducing the programme; 9) ready availability of required books and aids should be ensured; 10) the literacy programme should be considered as a national problem.

17 DAY W L: Bhilwara District literacy project - a study in problems of school-sponsored literacy programmes. Indian Journal of Adult Education 1967, 28(7), 2-4, 9.

The object was to bring the entire Bhilwara District (Rajasthan) to the neo-literate level. Preparatory work included: 1) a three-day orientation course in literacy administration, teaching materials and techniques offered to the Sub-Deputy Inspectors (Education Extension Officers) involved in the project by the Adult Education Department of the Rajasthan University; 2) survey to evaluate the progress of the project, identify problems, suggest solutions and also identify weaknesses in the training course, ten weeks after the project started. Lack of teacher orientation, assistance and training, teacher fatigue, and difficulty in recruitment of new volunteers were noticed; 3) improved course of seven days based on the survey findings. The problems yet to be solved are: 1) organization of post-literacy continuation classes; 2) development of village libraries; 3) lack of time available for District level officers to supervise the programme. School systems of India can effectively carry out successful adult literacy programme on a continuing basis if: 1) provision is made at the district level for adequate supervision and assistance to field organizers; 2) the officers at district level responsible for the literacy programme receive training in the nature of literacy administration and practical aspects of literacy institution; 3) field organizers are trained to provide well-informed guidance and assistance to literacy teachers.

18 INDIAN ADULT EDUCATION ASSOCIATION: Proposal to utilize schools for the promotion of adult education. Indian Journal of Adult Education 1967, 28(9), 11-13.

The objectives of the proposed scheme of 5 years' duration to be tried in 4 states (28 schools in each state) are to: 1) develop school curriculum suited to the needs of the community; 2) organize training and orientation courses for teachers to enable them to teach adults, youths and children; 3) impart literacy education to adults of the area; 4) prepare text books based on the curriculum evolved; 5) involve teachers' organization for accelerating educational development. For carrying out the proposed scheme two committees viz., planning committee, implementation committee and a training and evaluation unit should be set up. The planning committee consisting of representatives from World Confederation of Organizations of Teaching Profession, Indian Adult Education Association, Teacher organizations, Ministry of Education, State departments of education and state adult education associations would be guided by technical consultants from countries having adequate experience in developing curriculum designed to engage children, youths and adults in meeting the developmental needs of the country. The implementation committee would be set up at the local level. The details of the expenditure involved have been worked out. Comments of three educationists associated with adult education activities, Dr. M.S. Mehta, Shri J.C. Mathur and Dr. T.A. Kosky on the proposal have been given.

19 ROY N R: Adult education in India and abroad. Delhi, S. Chand and Co., 1967. vi, 200p. 16 ref.

The topics discussed are: 1) history of adult education; 2) definition of terms associated with adult education and literacy; 3) adult psychology and motivation; 4) teaching reading and writing; 5) role of public libraries and museums and community centres in adult education; 6) some media of mass-communication; 7) workers' education; 8) universities and adult education; 9) community development programme and adult education; 10) social education in India with special reference to West Bengal; 11) 'Gram Siksan Mohim' - a programme adopted by the Government of Maharashtra for motivating the village community to eradicate illiteracy. Other countries covered are Britain, U.S.A., Denmark, and U.S.S.R.

20 HIREMATH N R: Basic syllabus in practice. Dharwar, Karnatak University, 1966. xxiv, 304p. 32 ref.

An attempt has been made to work out in detail, the Bombay syllabus framed in 1950, in standard I of a basic school for one year. The study 1) examines how far the syllabus could be covered in standard I in one year, through correlated teaching, as envisaged in basic education; 2) tests the attainments prescribed for basic crafts and other items of the syllabus. The investigation was carried out in the Practising School of the Training College for Men, Dharwar (Mysore). The results are: 1) the Basic Syllabus could be worked out through activities connected with the child's physical, social and productive environments, as envisaged in basic education; 2) children were capable of initiating new activities, executing and assessing them intelligently; 3) the results of the terminal and annual examinations were satisfactory (chapter 4). The fact that the control group devoted about double the time devoted by the experimental groups to the common test items leads to the inference that correlated methods of teaching save time and energy of learners; 4) compared with students of a competent traditional school the achievements in the common tests revealed that the basic school children were: a) superior in social studies and general information and in mechanical reading of numbers, and b) equal in dictation, arithmetic, and written comprehension (chapter 8). 5) the syllabi in basic crafts and social studies need revision to suit the age group 5-7 years. In spinning crafts the processes and the apparatus need modification (chapter 5). Time allotted for craft work should be reduced and greater allowance should be made for cleanliness, health, social and expressional activities; Part IV of social studies dealing with the life of primitive man does not contain natural points of correlation and therefore should be deleted; 6) the muscular fatigue analysis shows that only 33 minutes of spinning should be given at a stretch. The yarn spun during this period was of 40% strength, which is the expected standard (Appendix G).

21 KAUL G N: Education Commission's report in the light of basic education. Quest in Education 1967, 4(2), 441-54. 5 ref.

A comparison has been made of the report of the Education Commission and the basic education scheme propounded by Gandhi in respect of the background under which each was conceived, the objectives for which each was conceived, the objectives for which each stands, and the philosophy each represents. There is much in common between the background against which the two systems have been formulated, but the Education Commission came into existence when industrial development had started. Close similarities exist between the objectives but differences are also discernible. The basic system conceives of a definite pattern of society based, for instance, on freedom from exploitation, cooperation, and non-violence, and provides an elaborate philosophy and a programme. The Commission is not clear in this respect. While it wants to bring about fusion of science and technology it did not indicate how exploitation, competition and violence resulting from technological and industrial progress, can be avoided. Again, the connotation of 'productivity' and 'craft' in basic education widely differs from that of the Commission. According to basic education, educational process itself may be productive, and in addition, education leads to better production. Similarly craft is not merely experience but should help to stimulate the observational and thinking faculties of students. Although the Commission based its objectives, methods, and approaches on the concepts of 'basic education' it discarded the term symbolizing the concept.

22 PERIATHIRUVADI D S: Correlation in basic education. V O C Journal of Education 1967, 7(1-2), 47-52.

In traditional methods of correlation clarity in one topic is achieved by correlation with another topic. The latter becomes subservient to the former. In basic education on the other hand both the items involved in correlation are given equal importance. For effective correlation the occasion chosen for the purpose should be natural in that: 1) it bears a close and intimate relationship with the knowledge that is sought to be imparted, and 2) it is capable of activating the faculty of the child. Correlation as practised in Basic Schools, may be divided into three categories: 1) multi lateral correlation, where three or four subjects of the curriculum are taught through one single incident; 2) unilateral correlation in which one single incident connected with the craft, social or physical environment is utilized for correlating with one single item from the curriculum having intimate relationship with the former; 3) collateral correlation in which knowledge and activity proceed simultaneously and correlation is implicit in the activity itself.

23 SHAMSUDDIN: Basic education scheme. (In his Thoughts on education. Jullundur, Punjab Kitab Ghar, 1967. 49-79.

The history of the basic education scheme sponsored by Gandhi in 1937 and promoted by Dr Zakir Husain has been traced and the fundamental principles and methods have been discussed. The aspects of basic education discussed in subsequent chapters are: 1) relationship between basic education and religion; 2) functioning of the basic school as a centre of community life; 3) social and cultural activities in basic schools; 4) personal hygiene in basic schools; 5) problem of acquiring land and construction of building for basic schools. It is expected that the basic schools being a part of community life would receive adequate cooperation of villagers in these matters; 6) the library in basic school; 7) the staff requirements of basic schools. A teacher should have two types of qualifications - academic and craft. He should be experienced in correlated teaching method; 8) the time-table in basic school. A tentative daily programme has been suggested.

COURSES OF STUDY (Higher Education)

24 GOSAVI M S: Management training facilities in India and abroad. (In Sen N B, Ed. Progress of education in free India. New Delhi, New book society of India 1967. 169-79).

An assessment has been made of the educational facilities in management studies since independence. The managing agency system which provided the enterprise and the capital for industrial growth in India, resulted in complete neglect of training of management personnel. The setting up of All-India Board of Technical Studies in Management in 1953 on the recommendations of a committee appointed in 1949 by the All-India Council of Technical Education marks the beginning of organized efforts for the promotion of management training in India. The Board is responsible for formulating courses of studies in business management and coordinating and development of management studies. Full-time and part-time courses are organized by: 1) universities; 2) technical institutions like Indian Institutes of Technology, Indian Institute of Science (Bangalore), V.J. Technical Institute; 3) All-India Management Association and its regional units; 4) Indian Institutes of Management (Calcutta and Ahmedabad); 5) National Institute for Training in Industrial Engineering; 6) Indian School of Public Administration; 7) Central Small Industries Organization; 8) Administrative Staff College, Hyderabad; 9) professional organizations like Institute of Industrial Engineers; 10) private and public sector industries; 11) South Indian Textile Research Association; 12) National Productivity Council. The efforts of All-India School for Faculty Development in Management Education deserve mention. Besides, institutions like Tata Institute of Social Science, Xavier Institute of Social Science, Delhi School of Social Work provide training in labour and social welfare.

25 INDIA. COMMITTEE ON MANAGERIAL PERSONNEL (MUDALIAR COMMITTEE, 1964): Report. New Delhi, Ministry of Education, 1966. 76p. [Chairman : Dr A Ramaswami Mudaliar].

Chapter IV surveys the existing training facilities in the four categories of courses of study formulated by the All India Board of Technical Studies in Management: 1) industrial engineering - postgraduate diploma course of one-year (full-time basis) or three-year (part-time basis) duration (detailed syllabus at Appendix VI); 2) foreman supervision - certificate course open to matriculates with three years' industrial experience (detailed syllabus at Appendix VII); 3 & 4) industrial and business management - postgraduate course of one-year (full-time basis) or three-year (part-time basis) duration open to graduate with two years' supervisory experience. In chapter V requirements of managerial personnel for the third and fourth Plans have been assessed and following recommendations have been made to increase training facilities: 1) imparting training to 300 industrial engineers per annum. Names of 15 institutions have been suggested for this purpose; 2) persuading industrial establishments to organize training courses for lower cadres of supervisory staff; 3) setting up at least 3 institutions for providing full-time training in foremanship and supervision during the Fourth Plan. The National Institute for Training in Industrial Engineering set up with the assistance of U.N. Special Fund could be one such training centre; 4) limiting requests for starting part-time courses in industrial management to areas having employment potential; 6) deputing teachers from the two Indian Instituos of Management and the National Institute for Training in Industrial Engineering to university institutions for a short period to overcome the shortage of teachers in management subjects and industrial psychology. Alternatively, students should be sent to these institutions; 6) introducing in universities the slab system designed by the Board under which in the three-year programme, full-time instruction is imparted for 3 months in a year; 7) setting up 2 more institutions on the pattern of Indian Institutes of Management during the fourth Plan for imparting training in general and commercial management; 8) increasing the intake capacity of the institutions conducting part-time courses in buisness management.

26 KALWACHWALA P S: Engineering degree education - an appraisal. Indian and Eastern Engineer 1967, Anniversary No: 10 95-9. 10 ref.

Two types of engineers are needed in India: 1) professional scientific personnel well-versed in the abstract, theoretical scientific aspect of engineering; and 2) engineers conversant with production processes and other applied phases of engineering. The curricula structure for undergraduate course should embody these general principles: 1) proper balance between science, humanities and engineering; 2) proper balance between theory and laboratory work; 3) adequate provision for design and project work; 4) first three years devoted to the core subjects and the fourth and fifth years reserved for some functional engineering and broad specialization in the form of electives. To provide an interface between the higher secondary and the engineering courses, creation of two streams - a liberal arts course and a liberal science course with some technical bias - in the higher secondary classes is suggested. The need for laying emphasis on design and project work and the importance of laboratory work have been discussed. It is pleaded that every university should have a centre for postgraduate courses and that there should be diversity and flexibility in accordance with needs of the region. Some suggestions are also given to promote and maintain faculty competence and avoid obsolescence of teachers.

27 KIRLOSKAR S L: Universities and the training of industrial and business management. Bombay, Asia publishing house, 1967. 15p. (R.R. Kale Memorial Lecture, 1967).

A complementary kind of joint effort by the universities and industry has been advocated for the training of managerial personnel in which formal education and work experience would be integrated. To this end suggestions are: 1) text-books should be supplemented with case studies which in course of time should form the major part of the curriculum in each subject. This would help to bridge the gap between principles and practice; 2) universities should provide for periodic, intensive and short-term refresher courses in fields like accounts, salesmanship and secretariat practice. These should be oriented to the needs of the existing personnel; 3) experienced and competent business executives, irrespective of their formal qualifications should be associated with university faculties. They should not, however, be bound by formal curriculum; 4) senior business executives should locate persons in universities, suitable for management cadre; this can be done by establishing personal rapport with faculty members; 5) social research organizations should undertake research in sales, purchase, product development, demand analysis etc.

28 **JAIN V C:** Teaching of preventive medicine in hospital clinical setting. Indian Journal of Medical Education 1967, 6(3), 158-9.

Didactic lectures, field demonstrations and practical training in rural health centres are not adequate in teaching preventive and social medicine. Training in clinical preventive medicine should be integrated to enable students to have a proper perspective of preventive medicine and become successful community physicians. To achieve coordination between the clinical and preventive medicine the following are suggested: 1) practical training in the immunization clinic in the out-patient department of the teaching hospital. This clinic can also cater to research needs in immunization techniques at postgraduate level; 2) learning in the nutrition clinic, the social and preventive aspects of nutritional disorders as well as the changing nutritional requirements from infancy to adolescence; 3) training in a hospital-based centre for social and epidemiologic study of patient and family that will inculcate in the student the collective approach for early detection and control of disease and the concept of clinical epidemiology. This centre can also provide facilities for postgraduate research on epidemiology of various diseases.

29 **MATHUR J S:** Undergraduate training in family medicine. Punjab Medical Journal 1967, 16(11), 499-503, 6 ref.

Students family advisory service programme, a project for students of the college of Medical Sciences, Banaras Hindu University, Varanasi is described. The objectives of the programme are: 1) to make the students aware of the medico-social problems of a community; 2) to observe the patient in his natural environment; 3) to have practical experience in comprehensive medicine i.e. health promotion, specific protection, diagnosis, treatment and rehabilitation; 4) to gain knowledge and aptitude in field work. A nearby village chosen for the project was divided into 5 sectors each manned by a social worker and an intern. Students of the last three years were divided into several small batches, each batch under the supervision of a senior teacher. One family was allotted to each student to be followed up for three years. Services of technician, sanitary inspector, pharmacist etc. were made available to each batch. Students maintained detailed records of their work which was submitted for assessment every month. This record together with an on-the-spot practical and viva voce examination was taken into consideration for final evaluation.

30 PANDE V K: New courses in commerce education. Regional College Record, Bhubaneswar 1967, 4(5), 4-7; Commerce Education in India ibid 8-9; Facts about commerce education in India ibid 14-15.

A survey of the existing conditions of commerce education reveals the following: 1) although the beginning of commerce education was made at the school level (in 1886 at Madras), school education in commerce was not developed as a college-preparatory course; 2) absence of any clear and well-defined objectives of commerce education and indiscriminate combination of liberal and vocational subjects retarded its growth as a professional course; 3) since on an average 75% students enrolled at the higher secondary stage in the commerce stream terminate their education at this level, the need for functional vocationalization of the higher secondary commerce course by increasing the contents is imperative; 4) the spread of commerce education is most in the Western region (14.66% of the total enrolment in university faculties) followed by the Eastern region (7.42%). For Northern and Southern regions the figures are 7.16% and 6.57% respectively. This is due to the concentration of industrial and commercial activities in Western and Eastern regions. The four-year integrated course recently initiated at the four Regional Colleges of Education leading to the degree of B.Com (Honours) B.Ed. is aimed at turning out commerce graduates suitable for both teaching and non-teaching jobs. The National Diploma in Commercial Practice, a two-year post-matriculation non-collegiate course, has a predominant practical bias. Detailed syllabi of both the courses have been given.

31 PATIL-KULKARNI V G: Veterinary education in new India. (In Sen N B, Ed. Progress of education in free India. New Delhi, New book society of India, 1967. 87-93).

The history of veterinary education has been traced from the earliest period. Veterinary education developed through the following stages: 1) diploma courses conducted by individual colleges and diploma conferred by the State governments before 1947; 2) bringing the veterinary colleges under the purview of universities during the post-independence period; 3) adoption of a uniform syllabus for a four-year degree course by the Indian Council of Agricultural Research as a sequel to the report prepared by the Inter-University Board. The number of pre-clinical subjects (e.g. agriculture, economics, statistics and nutrition) and clinical subjects (e.g. dairy science, gynaecology, obstetrics etc) has been increased in this integrated syllabus introduced in 1966; 4) introduction of postgraduate courses and research in veterinary sciences. Other landmarks in veterinary education are: 1) recommendations of the University Education Commission (1948) based on a study of the pattern of agricultural education in U S; 2) inter-institutional cooperation between 5 Land Grant Colleges (USA) and veterinary colleges of India.

32 PATNAIK K C: Teaching of bio-chemistry, bio-physics and bio-statistics to undergraduate medical students. Indian Journal of Medical Education 1967, 6(3), 132-3.

The importance of bio-chemistry, bio-physics and bio-statistics in the medical curriculum has been emphasized. The problems involved in their introduction in the course are: 1) the quantum to be incorporated with the already heavy curriculum of undergraduate medical education; 2) the dearth of teachers (medically biased subject specialists or medical men having knowledge in these subjects). This results in either too much specialization of these subjects or neglect of the subjects. At present these subjects are taught without any provision for assessment. Some questions on these subjects should be included in the examination. It is recommended that these subjects should be taught at the sub-undergraduate level so that students enter the medical colleges with some basic knowledge on which applied knowledge could be introduced as a built-in curriculum in the undergraduate medical education.

33 ROY M: Agricultural universities in India. Hindustan Standard 3 September 1967, Magazine Section p.3, Cols. 4-6, 10 September 1967, Magazine Section p.3, Cols. 1-3.

Describes the developments leading to the establishment of agricultural universities. The setting up of these universities had been greatly influenced by three factors: 1) recommendations of the University Education Commission (1948) based on a study of the agricultural education system in the U.S.A.; 2) review of the first and second Joint Indo-American Team; 3) the Land Grant pattern of the U.S.A. The concept underlying agricultural universities are: 1) the university should be responsible for research and teaching in agriculture and extension education of the State; 2) it should have as constituent units all colleges of agriculture, veterinary and animal husbandry home science, agricultural engineering and a school of basic science and humanities; 3) it should deal with the educational problems of rural people, develop leadership, increase agricultural productivity and generally improve the standard of living. The curricula and training programme should be oriented to the requirements of students. A list of 7 agricultural universities with their constituent colleges and teaching departments, as also the background of the eighth agricultural university - Kalyani University (West Bengal), has been given.

34 SCHROFF M L: Pharmaceutical education and its future in India. Eastern Pharmacist 1967, 10(116), 21-3.

Discusses the gradual deterioration of standards in pharmaceutical education due to ineffective teaching, and undue demands of students for lowering the examination standard often culminating in student indiscipline. Following suggestions have beem made: 1) to eliminate the possibility of victimization of students. Sessional marks should not be added to the total marks at the Final and Pre-Final examinations. Instead of marks, grades may be awarded for sessional work; 2) questions should not be jointly set by external and internal examiners. Either the moderation of question papers should be done by the Head of the Department and by an external member or the system of moderation should be done away with; 3) at the end of the second year of the course, the students should be divided into two groups: a) those whose achievement in science subjects is not up to the mark should be diverted to a course for specializing in the commercial and community service aspect; b) students showing aptitude in scientific subjects should also be evaluated externally. As in the USA, making continuing education mandatory for renewal of licenses of pharmacists, has been advocated.

35 SILK AND ARTS SILK MILLS' RESEARCH ASSOCIATION: Training course in SQC in textile industry. Silk and Rayon Industries of India 1967, 10(6), 256.

The course of three months' duration covers the following topics: 1) statistics and quality control (38 lectures); 2) fundamentals of weaving technology (12 lectures); 3) fundamental principles of work study (12 lectures); 4) principles of textile costing(8 lectures). Besides attending lectures the participants would be encouraged to undertake special investigation in their places of work (textile mills) for the practical work covered in the course. On completion of the course a written examination would be held and the successful candidates would be awarded certificates by the Association.

36 **SITAPATHI N R:** Curriculum contents to achieve goals - how curricula are constructed in India etc. Indian Engineer 1967, 11(4), 9-30. 4 ref.

A brief history of the development of technical education in India has been traced and the problems of falling standards, wastages and the defective examination systems have been discussed. In the construction of the curriculum provision should be made for accommodating new material, keeping in view the technological changes. This can be achieved without extending the duration of the course and increasing the load by: 1) eliminating obsolete curriculum material; and 2) increasing effectiveness of instruction. The curriculum should be suggestive and not restrictive. The great need of engineering education is for experimentation with the curriculum rather than its standardization. The following outline of the curriculum is given: 1) humanities and social sciences - 20%; 2) mathematics and basic sciences - 20%; 3) engineering sciences - 25%; 4) engineering analysis, design etc - 25%; 5) electives in the above categories, research or thesis and management - 10%. The process of construction of curricula in India, the problems of effecting changes in them, and the question of accreditation have also been discussed.

CURRICULUM

37 **KAKKAR S B:** Void in high school curriculum. ICBE Bulletin 1967, June, 73-4.

The void is the lack of provision for imparting occupational information and vocational counselling to students, especially those who do not go in for college education. The schools should develop in students a more balanced perspective of occupational openings, their requirements and benefit. Inadequate information on occupation results in wrong choice of occupation with consequent occupational frustration. Guidance and counselling programmes now available in schools are inadequate and the expenditure for their speedy development is prohibitive. Better results can be achieved if instruction on occupational information, vocational preparation, philosophy of work and allied topics are included in the high school curriculum.

38 KAPUR J N: Development of a mathematics curriculum for Indian schools. School Science 1967, 5(3), 197-207.

Components of a curriculum, the present position of mathematics curriculum in India, the need to formulate objectives of teaching mathematics, and some objectives and applications of mathematics education have been discussed. Besides, the following suggestions have been made for modernization and Indianization of the mathematics curriculum: 1) emphasizing the importance of zero and the place value system; 2) including a number of problems by Jain Munis, Bhaskaracharya, Brahmagupta and others; 3) including ancient India's contribution to mathematics; 4) including the contribution of contemporary Indian mathematicians; 5) celebrating the birthdays of great mathematicians; 6) familiarizing the students with some of the active Indian research workers; 7) highlighting the contributions of ancient and modern Indian mathematicians in the prefaces of textbooks. Audio-visual aids for teaching mathematics and experiments on mathematics should also be developed. The study groups formed by the NCERT should investigate methods for developing the curriculum.

39 LULLA B P: Comparative analysis of the views of two Education Commissions on the teaching of social studies. Social Studies Teacher 1967-68, 4(2), 1-6.

The study reveals the following: 1) both (Secondary Education Commission, 1952 (SEC) and the Education Commission, 1964-66 (EC) have not given significant weightage to the teaching of social studies; 2) both agree upon the aims of teaching social studies, but give no details as to how these aims could be achieved; 3) whereas SEC gives a clear direction by outlining only the aim and approach of social studies, EC shows contradictions in its statements about the goal of social studies and about the methods of organizing the syllabus. EC appears to be biased more towards the disciplinary value afforded by social sciences than the pragmatic use to which they could be put through social studies. 4) EC has overemphasized the scientific spirit and method of social sciences. Unlike SEC it has treated social studies and social sciences as single subject or similar courses vying with each other for existence in the school curriculum. 5) both agree that the courses of social studies in schools should stress national unity and unity of mankind; 6) SEC favours integrated teaching of social studies but EC stresses on 'social science approach' at all levels.

40 MISRA R C: Why music? ICBE Bulletin 1967, June, 68-72.

Educational value of music and the causes of inadequate social recognition of music have been discussed. Following suggestions have been made to improve the status of music education in the curriculum: 1) provision for adequate facilities for the training of teachers in music as recommended by the Education Commission; 2) reorganization of courses of music in the curriculum at different levels. At the university level provision should be made for teaching music and conducting research; 3) awarding scholarships; 4) arranging music conferences of pupils; 5) organizing music competitions and providing opportunities to winners to participate in the National Programme of All India Radio.

41 National and social service for students - 21 articles ... on the ways, means and feasibility of a practical programme. Education Quarterly 1967, 19(1), 1-63.

Following problems have been discussed from the point of view of educational administrators: 1) content of the programme programme at school and college stages; 2) whether the programme should be compulsory or voluntary; 3) whether it should be alternative to National Cadet Corps (NCC) or in addition to it. Following are the various opinions: Most of the authors agree that the programme should be an integral part of the whole educational process and as far as possible be related to the teaching work of the institution. About the contents, duration and level, opinions differ: 1) it should begin from the upper primary stage and continue up to the undergraduate level and should take two forms: community living in the school campus and community development and national service; 2) at primary stage social service need not take any specific form. From class VIII compulsory social service should be a school discipline; 3) the entire programme should start at the graduate level; 4) the programme should not be confined to one stage of education; 5) the programme should include a ten-day service camp in holidays in the last 3 or 4 years of a student's career in the school; 6) besides camps during the vacation, the programme should run all the year round - after college hours or on holidays. There is no unanimity on the issue whether the programme should be compulsory or voluntary. A section favours introduction of the programme in selected institutions as pilot projects. While some authors favour the programme as an alternative to NCC, some want this in addition to NCC.

42 RUST J C W: Modernizing the mathematics syllabus. Teaching 1967, 49(4), 106-9.

The present mathematics syllabus is most outdated and is devoted to the manipulation of abstract algebraic symbols and the development of factorizing methods or of solving hypothetical equations. Scientists like Dr. J.N. Kapur suggest a complete switch-over to the American system (syllabus framed by the School Mathematics Study Group), according to which students from primary school onwards are taught only the basic principles and relationships which underlie the manipulative processes and the detailed skills are taught in colleges. The author and some like-minded teachers would prefer a syllabus with a technological and scientific bias suited to India's present needs. Understanding of underlying principles can be achieved even at the school stage, along with the acquisition of specific skills in mathematical and scientific processes. Instead of depending entirely on American ideas unsuited for India as is being done by the National Council of Educational Research and Training, guidance may be had from countries like Russia, Japan and Britain.

43 SONI B R: New directions in elementary school arithmetic. Indian Educational Review 1967, 2(2), 71-8[illegible].

The mathematics curricula of Indian schools are arithmetic-centred. This explains the low standard of achievement in mathematics at the secondary level. Instead of teaching unproductive arithmetical methods of solving problems, algebraic methods should be used. Children should therefore become acquainted with letter symbols in the elementary classes and use them in the process of learning arithmetic preparatory to the systematic study of algebra in class V. Experiments carried out by the Academy of Pedagogical Sciences, Moscow show that children in elementary classes possess more intellectual capabilities for abstract thinking and that simple elements of algebra can be introduced in elementary classes. Along with the teaching of four arithmetical operations with natural numbers, the study of properties and laws of operations should be introduced in the elementary curriculum. To facilitate teaching the simple equation systematically in class V, relationships between the four operations should be introduced in elementary classes. Some experiments on the early introduction of simple elements of algebra in the U.S.S.R. and an outline of a revised curriculum in mathematics for classes I - IX have been given.

44 VARMA S C: Place of agriculture education in schools. Progress of Education 1967, 42(1), 21-2, 27

The Education Commission's recommendations for imparting productivity-oriented agriculture education through vocational education and work-experience in schools have been discussed. The three stages of vocational education recommended are: 1) lower primary stage - The course should be on part-time basis serving the immediate needs of the children who do not study beyond this stage; 2) higher primary stage - This course intended for rural boys joining their family farm would develop abilities, attitudes and work habits needed to increase productivity; 3) lower secondary stage - Agriculture polytechnics should be opened for preparing skilled workers, farm machinists, farm management assistants, and middle level technicians. For providing work-experience, rural schools should have their own farms and urban schools should introduce gardening. At the primary stage, agriculture should be taught without offering it as a separate subject, since pre-vocational education in agriculture is fundamental to successful vocational agriculture.

ECONOMICS OF EDUCATION

45 BRAHMANAND P R: Economic theory and investment in education. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 23-32).

An analogy between the outlays on education and those on physical capital has been attempted. Replenishment of the necessary annual flow of labour active in economic pursuits is possible through wage differentials within certain families already having trained or skilled members and also through loans, scholarships, etc. It is postulated that, in a society where the growth rate and profit rate are non-constant, the policy of stable wage differentials should not be pursued. At the level of individual cases of investments in the education of ordinary labour, difference exists between the theory of the firm and of the "family" due to variations in motivation. At the social level, too, only the educational outlays which are technologically necessary for self-perpetuation of labour force can be termed similar to outlays on physical capital. Again, it is difficult to segregate the impact of a change in new knowledge from that created by addition in capital and labour which are required to use new knowledge. Changes in technology are significant only to the extent of an annual provision for depreciation. In under-developed countries even notional depreciation funds are meagre because of large-scale import of equipment. Variations in technology would have little effect in under-developed countries as compared to developed societies. It is concluded that apart from the conceptual problems of isolating the impact of new technology (education), an under-developed country may be less interested in such a problem.

46 HUSAIN I Z: Returns to education in India - an estimate. (In Baljit Singh Ed. Education as investment. Meerut, Meenakshi prakashan, 1967, 141-56).

The following hypotheses have been examined in the light of Indian data: 1) positive total and differential returns are associated with various levels of education; 2) GNP per capita and outlay on education or some index of educational development are positively correlated. Following are the findings: 1) gross yearly rate of return on total cost: matriculates 44%, graduates 11%, postgraduates 10%. The rates of return gradually decline due to increasing indirect cost at successive levels of education; 2) differential rates of gross return in total cost: professionals 7%, postgraduates 4%, and graduates 2%; net returns on total cost: matriculates 37%, graduates 4%, postgraduates and professionals 3% each; 3) differential net returns: positive only for professionals. A few conclusions are: 1) general university education has over-reached its demand; 2) there is inherent danger in the expansion of professional education without corresponding growth of physical capital accumulation and technology; 3) lower differential net returns for higher educated manpower may be due to payment being lower than their marginal productivity and may call for an upward revision of pay-scales; 4) improvement of returns call for structural efficiency and skill oriented changes rather than general educational expansion.. As regards GNP per capita the findings are: 1) no significant correlation between per capita income and percentage of literacy, percentage of children (11-17 years) at schools, and also educational expenditure per capita of different States; 2) significant correlation between per capita income and higher technical and non-technical enrolment. It is concluded that the returns on education as investment cannot be looked forward in direct changes in GNP per capita and education cannot be isolated as a single determinant of economic growth.

47 KOTHARI V N: Return to education in India. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967, 127-40. 4 ref.)

At attempt has been made to estimate the social and private monetary rates of returns to education based on the following factors; 1) age-earning profile for each educational level; 2) cost of education for each type of education. The stream of net earnings for each educational level (i.e. earnings relating to the particular educational level, less the earnings relating to the next lower level, less the cost of obtaining that particular level) was then determined. A rate of discount was calculated by trial and error which made this series sum to zero. Social monetary rates of return were: high school 20% ; colleges (all types of courses) 13%; arts and science 10%; technical and engineering 22%. Private returns were: college 14%; technical and engineering 25%. These rates are crude and may be subjected to further refinements e.g. correction for survival rates, unemployment rates, and ability factor.

48 **MERRETT S**: Refashioning the concept of investment in education. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 33-45. 32 ref.)

Examines the advantages and the limitations of the concept of education as a mode of economic production, integrating the activities of a set of factors of production over a given gestation period. The advantages have been illustrated with reference to the growth theory, student opportunity cost, student finance, relation between the rates of return and manpower, need studies of education. But there are limitations in using the concept of human capital. The tools of capital theory may be used for analyzing the role of education, when the latter may be conceived only as a process of producing human capital and when the 'output' in the process of education can be defined and quantitatively estimated. Investment in education is a permissible conceptual device only if the primary function of the education sector in question is to provide a direct contribution to the economically productive activity of the country. The whole question involves value-judgement regarding the role of education in building the society. The model of education as an economic sector producing capital goods (skills) for economic growth may be appropriate in case: 1) the society is more growth-conscious; 2) the value orientation of the society is more consistent with growth-anxiety; 3) one educational sector is higher than another in a given country; 4) a country is relatively poorer in a given educational sector.

49 **MUKERJI K, RAO K**: Education and economic development in India between 1951 and 1961 - an empirical investigation. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 102-11. 7 ref.)

The study is based on an attempt to establish correlations between the following factors: enrolment in different levels of education (primary, secondary, higher technical, higher non-technical) and literacy on the one hand and per capita income and also the rate of growth, on the other. All the correlation coefficients are non-significant except between enrolment in higher technical education and rate of growth of per capita income (at 5% level in 1951-52 and 10% in 1959-60). The proposition that outlay on higher technical education alone can be considered as being of specific economic significance and may be considered as investment in a more general sense of the term, is thus substantiated. Although other correlation coefficients are non-significant, following points need attention: 1) unexpected relationship between higher non-technical education and growth of per capita income; 2) low correlation coefficient between the economic indicators and both literacy and primary education; 3) though non-significant, the coefficients for secondary education are the highest for all levels except higher technical education; 4) extremely low correlation between enrolment in higher technical education and per capita income; 5) indications are that improvement in primary education enrolment follows rather than leads development, but is not specifically related to the level of income. The limitations of the study have also been discussed.

50 NAYAR D P: Education as investment. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 46-60).

A review of the literature on the subject reveals the following limitations of the work done so far: 1) determining resource allocation based on results of resources is difficult, particularly in under-developed countries; 2) because of unsettled issues regarding components of costs and returns, the results in regard to the return from investment cannot be quantified. Although no satisfactory method exists to determine the exact quantitative measure of the contribution of education to economic growth, sufficient data is available to underline the importance of education in economic development. It is however difficult to separate its cultural and social benefits from economic benefits as they act and react on each other. Some of the most important contributions of education in developing countries are: 1) activating idle resources by employing teachers, who would otherwise be unemployed; 2) utilizing idle manpower for putting up school buildings and other community assets, using local material; 3) using labour-intensive methods of production which consequently save the scarce capital; 4) helping formation of capital by bringing the subsistence sector into monetary account.

51 PADMANABHAN C B: Education and economic growth - progress and problems. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 112-26. 32 ref.)

An appraisal has been made of three approaches for the assessment of the contribution of education to economic growth: 1) simple correlation approach (b) residual approach (c) returns to education approach. The study shows that the present state of knowledge is inadequate to establish a relationship between education and economic growth. So far as India is concerned it is difficult to assess the educational growth vis-a-vis economic development. Studies should be attempted in India to underline the relationship of education with economic growth on the following lines: 1) making an aggregative study analyzing the cost-benefit relationship; 2) exploring separately the relationship between education and productivity of workers in agriculture and industry. Substantial investments had been made in Indian agriculture without a corresponding rise in productivity. The impact of education commencing from literacy to ad hoc training in modernized farming on agricultural productivity should, therefore, be assessed; 3) economizing in the field of educational finance; 4) finding input-output relationships in universities. Similar studies in U K (1938-62) indicated a downward trend in efficiency in British universities.

EDUCATION : GENERAL

52 INDIA. CENTRAL ADVISORY BOARD OF EDUCATION: Proceedings of the thirty-second meeting held at Chandigarh in October 1965. Delhi, Manager of publications, 1966. 355p.

Following recommendations on different topics have been made: 1) science education at the school stage - increased provision for elective sciences and compulsory science for those not opting for elective science. Teacher training institutions for elementary teachers; 2) preparing uniform science syllabi; facilties for teaching of science in rural areas; 2) diversified courses - laying greater stress on vocational contents and providing courses in technology, agriculture and home science for larger number of students at the secondary stage; 3) basic education - making elementary education conform to the concept of basic education and post-basic schools an integral part of the system of secondary education; 4) evening colleges and correspondence courses broadening the concept of evening colleges to meet the requirements of the increasing number of regular students as well. Examining the possibility of starting correspondence courses in more universities and extending such courses to science subjects; 5) education in international understanding - extending the programme to the University level; 6) restricted admission - imposing restriction on admission in colleges to prevent further decline of educational standards; introducing aptitude test for student selection; 7) new universities - setting up university centres instead of new universities for a complex of colleges with about 10,000 enrolment to be developed eventually into universities; 8) social education - adopting programmes similar to Gram Shikshan Mohim of Maharashtra; adopting follow-up programme for strengthening the literacy content acquired by the neo-literates and providing them opportunities to develop purposeful reading habits and utilizing literacy for improvement of knowledge or vocational skills. 9) counselling service - ensuring better coordination between the student advisory bureaus at the universities and employment exchanges.

53 KARVE D G, AMBEKAR D V, Eds.: Speeches and writings of Gopal Krishna Gokhale. Vol. 3. Educational. Bombay, Asia publishing house, 1967. xv, 331p.

The first part is a complete record of Gokhale's speeches in the Imperial Legislature Council. He opposed University Bill introduced in the Council on 4th November 1903 aimed at ensuring adequate governmental control on universities. He pointed out that the standard of education depends not on the constitution of a university but on the character of examinations prescribed by it. Partly for the same reason and also to protect university autonomy, he also opposed the bill intended to validate action taken under the Indian Universities Act. 1904. Next two speeches are on Elementary Education Bill introduced by him on 16th March 1911 for making better provision for the extension of elementary education. The last one is on extension of primary education. Part II contains some of the speeches made outside the legislature. The topics are: Elementary Education Bill, women's education, students and politics, teaching of history. At the tenth annual general meeting of the Bombay Graduates Association, (11th April 1891) he pleaded for the creation of a vernacular university with English and Sanskrit as compulsory second languages. Part III is a collection of Gokhale's tributes to some great personalities like Hume, Ranade and Sister Nivedita.

EDUCATIONAL PSYCHOLOGY

54 AARON P G: Proposed mathematical model for teaching effectiveness based on one of its correlates. Journal of the College of Education, Karnatak University 1967, 5(1), 69-71. 3 ref.

An attempt has been made to derive a theoretical equation to show the relationship between the number of years of teaching experience and the quality of teaching. A sample of 509 male secondary school teacher trainees drawn from various colleges of the Karnatak University having varying degree of pre-training experience was subjected to the study. After the ninemonth training course, the quality of their teaching were assessed in two subject areas. Students were grouped according to the number of years of experience and the mean score obtained by each group was worked out. Results were plotted in a graph. The theoretical model worked out to be $Y = a+b \log X + CX^2$ where a is the trend value at the time of origin, b the slope at the origin, c the characteristic of the curve, X the number of years of teaching experience and Y the marks in teaching practice.

Using the equation, theoretical Y values were obtained and plotted in the same graph A study of the theoretical and empirical curves in the graph shows that theoretical model gives a sufficiently close fit for experience up to 11 years.

55 DUTT N K: Extraversion, neuroticism and teaching success. Teacher Education 1967, 1(4) 39-42. 9 ref.

Data were collected for 95 graduate trained teachers (57 male and 38 female of average age 30.05) possessing 4-8 years of teaching experience. To assess extraversion-introversion (E) and neuroticism (N), the author's "Adaptation of the Maudsley Personality Inventory (MPI) on Indian Population with separate norms and multiple regression weights was used. To assess the teaching skill, each teacher was rated by six raters (one headmaster and five students). The sum of the average score for the classroom situation and the average score for out-of-the classroom situation was taken as the total teaching success score. The subjects were divided into three subgroups: high (H), average (A), and low (L). The findings are: 1) extraversion-introversion has practically no relationship with teaching success; 2) neuroticism is substantially and negatively correlated with teaching success, though emotional stability alone does not determine high teaching success, as there is no significant difference in N scores of H and A subgroups.

56 GEORGE E I, DEVADASAN K, DHARMANAGDAN B: Verbal conditioning and suggestibility. Indian Journal of Experimental Psychology 1967, 1(2), 45-9. 8 ref.

The study was conducted with 20 postgraduate students of the Kerala University (11 males 9 females) in the age group 19-30 to examine the relationship between verbal operant conditioning and suggestibility. Verbal conditioning procedure used was similar to the sentence construction task used by Buss et al (Journal of Experimental Psychology 1958, 56, 139-45) and Spielberger (Journal of Personality 1962, 30, 73-101). To measure suggestibility, four separate objective tests were given: 1) progressive lines test; 2) progressive weights test; 3) size weight illusion test and 4) the suggestible questions test. In addition, the Malayalam version of M P I was administered to assess neuroticism and extraversion. The findings are: 1) positive but insignificant correlation between extraversion and conditionability; 2) negative but insignificant correlation between extraversion and extinction; 3) between neuroticism and extinction the correlation is negative and significant at the 5% level; 4) suggestibility is not substantially correlated either with neuroticism or extraversion-introversion; 5) highest correlation

(1% level) is found between conditionability and suggestibility. The conclusion is that those who are highly conditionable are also highly susceptible to suggestion by indirection; 6) very low positive correlation between extinction and suggestibility.

57 JITENDRA MOHAN, VIDHU MOHAN: Age, sex and reminiscence. Indian Journal of Experimental Psychology 1967, 1(2), 50-2. 17 ref.

Two experiments were performed to study the effect of age and sex on reminiscence in pursuit rotor task. The Iafayette rotary pursuit apparatus (British Journal of Psychology 1962, 53, 149-57) was used. In experiment I, the subjects were 50 postgraduate male students (25 of mean age 29.6 and 25 of mean age 19.2). In experiment II, the subjects were 50 students (25 males of mean age 22.1 and 25 females of mean age 21.8). The results are: 1) age is a very important variable in adult reminiscence; with age, reminiscence improves. The inferences made in two studies (Ammons et al Journal of Experimental Psychology 1955, 49, 127-33; Davol et al Perceptual-Motor Skills 1965, 21, 351-7) with pre-adult subjects are corroborated in this study with adult subjects. In terms of dissipation of reactive inhibition resulting in reminiscence, the implications are for greater development of reactive inhibition in older age groups than in younger age group; 2) sex variable has insignificant role in determining reminiscence and performance on pursuit rotor task. In terms of development and thereafter dissipation of reactive inhibition, male and female subjects do not show significant difference.

58 MATHUR S, KUMAR B: Study of delinquents and non-delinquents through children's apperception test. Indian Journal of Applied Psychology 1967, 4(2), 72-5. 2 ref.

The test consisting of a series of pictures suitable for evoking special childhood problems was administered to 15 delinquent and 15 non-delinquent boys of age group 10-11, belonging to the same socio-economic group. The findings are: Delinquents usually speak of animal figures more personally and their identification is more complete whereas non-delinquents did not associate human characteristics with animals. Dominance, obedience, activity, acquisitiveness, aggressiveness, dependence are the most significant qualities ascribed to the heroes which were significantly different in the two groups. The delinquents are more aggressive, authoritarian, dominating and acquisitive, but less active, less friendly and display much oral need. The non-delinquents are more disciplined, friendly, obedient, and active and display more need for achievement. The non-delinquents are less fearful and hardly display oral needs. They are also dominated by their super ego. The themes of achievement, going to school, getting punishment for failing to make grades dominate the stories of non-delinquents. The themes of the delinquents are filled with oral satisfaction, irrational punishment, anger and aggression projected into parental figures using harsh tactics. It is concluded that the delinquents are the most 'apt cases' for negligence.

59 MEHROTRA K K: Personality study of Tibetan boys. Journal of Vocational and Educational Guidance 1967, 13(2-3), 46-54. 25 ref.

The sample consisted of 35 Tibetan boys (age range 13-16) of classes VII and VIII who migrated to India during the Chinese invasion. Indian adaptation of Murray pictures (Thematic Apperception Technique) (Murray H A: Explorations in personality. Cambridge, Harvard Psychological Clinic, 1942) was used and the test was given in a self-administered written form. Murray's method of analysis and interpretations has been followed with modifications suggested by Henry W E (Analysis of fantasy. N.Y., Wiley, 1956) and Aron B (Mannual for analysis of the T.A.T., Berkeley, California, W.E.Birg, 1949). The frequency of occurrence of various responses of the subjects have been counted and tabulated. It has been concluded that the Tibetan boys have got very good adjustment in the school which is indicated by the optimistic and ambitious responses of a good number of them. However the need for guidance and counselling is suggested by responses which indicate the lack of awareness of and active participation in the environment, poor reality contact as related to the high need of achievement and acquisition, a tendency to ignore the past and the present in their future planning, and negative emotions like anxiety, dejection, fear, insecurity and inferiority.

60 PANDE C G, RAJKARNE C G: Reminiscence- a factorial study. Indian Journal of Experimental Psychology 1967, 1(2), 66-70. 9 ref.

The effect of the three variables viz., degree of learning, meaningfulness of the material and pronouncing vs spelling method of learning, on the degree of reminiscence was studied with 192 undergraduates of both sexes randomly selected from various colleges in Nagpur. Three values (i.e. 25%, 50%, and 75% mastery before the rest preceding the recall) of the first variable two values (high and low) of the second variable and two levels (i.e. spelling vs pronouncing) of the third variable were considered. An experimental design similar to the Ward-Hovland procedure and the recall measure of reminiscence were used. Four tests of 12 syllables each were used: 1) one each for high and low association value to be learnt by spelling; and 2) one each for high association and low association value to be learnt by pronouncing. Ninetysix subjects were randomly assigned to 12 experimental group and the other 96 to 4 control groups which learned 4 lists to 100% mastery without break. The results of analysis of variance of the reminiscence scores indicate that the 3 main effects - degree of pretest learning, association value, and method of learning - are insignificant. That is, the mean reminiscence scores of various groups having different levels of the 3 variables are not significantly different and the observed differences probably occurred by chance. All the interaction effects are also insignificant.

61 PAREEK U, Comp.: Behaviouralscience research in India - a directory 1925-65. New Delhi, Behaviouralscience centre, 1966. xi,574p.

Covers researches, published and unpublished, in the following fields of behavioural sciences: psychology, sociology, cultural anthropology, education, social work, community development, agricultural extension and political behaviour. Topics pertaining to education in general and educational psychology in particular scattered throughout the bibliography, are entered under the following headings: 1) individual development (childhood, adolescence); 2) individual dynamics (motivation, values, attitudes, interests, leadership); 3) personality and abilities (intelligence, aptitude and aptitude testing, specific abilities, achievement testing, personality measurement); 4) social pathology (delinquency and indiscipline); 5) behavioural disorders; 6) guidance and counselling; 7) administrative behaviour (educational administration); 8) education at various stages; 9) education of various groups; 10) curriculum; 11) teaching of subjects; 12) training (including teacher education). A companion publication of the author is: Guide to Indian behaviourial science periodicals. Delhi, Behavioural science centre, 1966. ii,128p.

62 NARAYANA RAO S: Adjustment problems of college students. Journal of Vocational & Educational Guidance 1967, 13(2-3), 83-92. 1 ref.

A sample of 2338 male undergraduate students (professional and non-professional) of age group 17-21 years was selected from colleges (one from each district) under the jurisdiction of S.V. University (Tirupati, Andhra). The sample represents about 50% of the male undergraudate population of the University. A problem check list with 275 problems in the following areas was used: 1) academic adjustment; 2) personal adjustment; 3) economic and living conditions; 4) vocational plans; 5) health and physical conditions; 6) social relations; 7) parents and home; 8) recreational activities; 9) morals and religion; 10) sex and marriage. Some of the conclusions are: 1) urgent need for providing adequate financial assistance to students; 2) providing proper guidance and necessary facilities for acquiring desirable study habits and skills to first generation students; 3) providing counselling to students to ease emotional tensions and anxieties which contribute to the denudation and dissipation of their energies; 4) students are conscious of their parents' anxieties and worries; 5) disruption of orderly student life is not caused by irresponsibility and indifference of students. Students should be encouraged to establish a relaxed intellectual relationship with members of the faculty.

63 SABBERWAL N D: Emotional tension and its effect on student performance in school examinations. Education & Psychology Review 1967, 7(2), 92-100.

The aim of the study was to determine the effect of tension on pupils' performances in examination and on their personality adjustment. Thirty girl students of class IX were divided into 3 homogeneous groups of equivalent achievement on the basis of a preliminary test. They were subjected to teaching for 15 days, during which maximum tension was applied on one group. Minimum tension was applied to the second group, while the third group was kept free from tension. After 15 days of teaching, a tension inventory was prepared and administered, the final achievement test was conducted, and a personality inventory was used to determine the effect of tension on personality adjustment. The findings are: 1) a negative correlation exists between tensions and performance in the examination i.e., high tensions produce low marks and absence of tensions results in high marks; 2) tensions do not affect the personality adjustment. The changes observed in the scores of pupils of three groups in the final achievement tests were due to the creation of tensions in the two experimental groups.

64 SINGH L C: Development of an occupational differential. Indian Educational Review 1967, 2(2), 128-35. 5 ref.

Describes the construction of an Occupational Differential (OD) scale based on the affective meanings attributed to various occupations by a sample of 100 Class X boys of two high schools of Lucknow City. The steps and sub-steps involved in the development of this measuring instrument, based on the method used by Osgood (American Anthropologist 1964, 66(3), 171-200) are: 1) selection of occupational concepts; 2) elicitation of their Hindi equivalents; 3) selection and production of scales, determining qualifier domain and opposite elicitation. From each of the 8 field categories (i.e. service, business contact, organization, technology, outdoor, science, general cultural, and art and entertainment), five occupations were selected, taking one from every prestige level category. Four dimensions for affective meaning of occupational titles could be discovered: 1) temperament factor; 2) intelligence and skill factor; 3) morality factor; 4) appearance factor (indicating something about the appearance of a worker). Representing each of the above four factors, four scales with the highest loading on each were selected to make up an OD in Hindi. This tool may be used: 1) for comparative studies of affective meanings attributed to the various occupations by individuals in various sub-cultures; 2) by guidance counsellors for understanding the meaning the counsellees attribute to their preferred occupations; 3) by the counsellor to understand the affective aspects of a counsellee's preference for a particular occupation and to know whether this preference is realistic.

65 SINHA S P: Effects of praise and reproof on paired-associate learning in educationally retarded children. Indian Journal of Experimental Psychology 1967, 1(2), 63-5. 8 ref.

The sample selected from the 7th and 8th classes of Holman Institute, Agra consisted of 36 cases divided into experimental and control groups. These two groups were further subdivided into three groups each i.e., praise group, reproof group, and no-treatment group. The subjects were randomly assigned to these groups. Two lists of paired-associates containing seven colours paired with seven different non-sense syllables or CVC (constant-vowel-consonant) trigrams selected from Glaze's list (Journal of Genetics Psychology 1928, 35, 255-64) having association values near about 30% and difficulty level of 50% (determined in the pilot study) were used. The conclusions are: 1) the underachievers require more trials on the average to reach the riterion of success than the normal achieving children; 2) the educationally retarded children did better after reproof; 3) the praise of educationally retarded children results in slowing the learning; 4) the praise of normal achieving children results in accelerating the learning while reproof has a negative effect, i.e. it results in slowing the learning.

66 **TRIPATHI S N**: Educational psychology - a review of research in India. Alumnus 1967, 2(1), 14-20. 3 ref.

Of the 83 doctoral theses in education approved by the Indian Universities till 1961, 40 deal with educational psychology. The break-up is: testing 18, psychology of childhood and adolescence 8, exceptional children 5, theoretical topics 6 and statistical studies 3. Construction and standardization of group intelligence tests has been a popular topic. Test on social intelligence (M.S. University of Baroda, 1961) is an attempt at new direction, considering the meagre world literature on the topic. Greater sophistication in statistical treatment is noticed only in recent tests. Concerning exceptional children, emphasis is on personality of delinquents. No work has been done on gifted children till 1961. An analysis of the tests included in the First Mental Measurement Handbook of India (Indian Educational Material Vol.1, No.3, Entry No.685) reveals the following: 1) no standardized intelligence test is available on an all-India basis. One of the handicaps is the non-availability of correct age from the school records. A non-verbal group test should be developed to overcome language problems; 2) an achievement test for mathematics suitable for three school levels being developed by NCERT is of great significance; 3) lack of coordination among institutions led to the duplication of aptitude tests; 4) inappropriate adaption of personality tests developed in foreign countries does not suit Indian conditions.

67 **VERMA M**: Sample survey of mental ability in the urban and rural secondary schools of eastern Uttar Pradesh. Indian Educational Review 1967, 2(2), 146-9.

A sample of 185 Class IX students was drawn from schools situated in 7 district headquarters (urban) and from one rural secondary school. The average age of rural boys (14.63) is slightly higher than that of urban boys (13.70). The results of the study show that: 1) urban boys are superior to rural boys in Mental Ability, Matrices and Closure tests; 2) rural boys are superior to urban boys in Inductive Reasoning tests; 3) there is no difference between the two samples with regard to the Numerical and Rote Memory tests. The differences in ability in favour of urban boys are attributed to differences in environment. A factor analysis of the results was also done. The conclusions of the study are: 1) in nearly all types of cognitive functions, urban children are superior to rural children who are a year older on the average. The largest difference is in respect of capacity for insight into various things; 2) the next largest difference is in 'g' factor of intelligence; 3) the smallest size of difference is in respect of the Matrices tests which is culture-free and taps the ability to reason from meaning-less, non-verbal forms; 4) in specific tasks (Number and Rote Memory) the difference in favour of the urban boys is even less. The Inductive Reasoning test merely shows that rural communities provide education in intrafamilial relationships towards which the children by reason of age are better oriented.

EDUCATIONAL RESEARCH

68 CHAUDHARY R K: Educational research and responsibility of training colleges. Progress of Education 1967, 41(12), 422-5.

Educational research in India is confined to universities and institutes of education and the results remain unutilized. Research should grow out of practical class-room experience. Some postgraduate teachers with research aptitude should be appo as primary teachers and paid the salary of college teachers to promote research in primary education. Emphasizing the role of teacher training institutions in promoting research, the following suggestions are given: 1) curtailing the syllabus on principles of education and introducing a new paper on techniques and methods of investigation; 2) training primary teachers in systematic observation of child behaviour and secondary teachers in experimentation, testing, survey work and statistical analysis; 3) adopting discussion method of teaching in teacher education colleges; 4) if necessary, changing the logical sequence of units prescribed under a paper (e.g. in psychology, child development should be taken up first instead of education and psychology); 5) encouraging student teachers to undertake small research projects.

69 NATIONAL INSTITUTE OF BASIC EDUCATION, NEW DELHI: Research in education. New Delhi, National Council of Educational Research and Training, 1966. vi, 136p. 5 ref.

Based on 12 memoranda papers prepared for a seminar organized by the Institute to enable its participants to improve their understanding of research concepts and procedures. The memoranda were intended to present a point of view, to stimulate thinking, to limit the area of discussion and to provide some practical exercises. Topics covered are: 1) research as a basis for improving education; 2) the research attitude; 3) the elements of action research; 4) selecting the research problem; 5) searching the literature; 6) planning the research: sources of data; 7) reliability and validity; 8) quantifying and analyzing unstructured data; 9) data through questionnaire; 10) behaviour observation; 11) measuring the higher mental processes; 12) preparing the research report.

70 RUST J C W: Our children are not guinea-pigs. Teacher Education 1967, 1(4), 29-32.

Use of children as subjects for psychological research has been deprecated. Two examples of such research have been cited in which for the purpose of study hatred between close friends was induced (Fleming C.M. Teaching, N.Y., Wiley, 1958. p.82) and the children were encouraged to think in terms of caste difference and prejudice (Bennur C S. Progress of Education 1967, 41(8), 294-8). Most of the investigations do not reveal anything new but cause irreparable mental damage. In other fields of research also, experiments like new methods of teaching retard the academic progress of the students. Two pleas have therefore been made for the consideration of researchers before a work is undertaken: 1) whether the research is useful; and 2) whether the experiment would damage the children mentally, socially or academically.

ELEMENTARY EDUCATION

71 GROVER L: Universalization of primary education in rural areas - problems and prospects. A case study at district level outlining a perspective plan for the area. Manpower Journal 1967, 3(1), 47-78.

A review has been made of progress in the universalization of primary education in the rural area of the Meerut district during the period 1951-63, and the local conditions and factors affecting the expansion of primary education. It is unlikely that the realization of constitutional directive in respect of primary education would be achieved even by 1981. Taking into account different factors like adverse attitude of people towards education (especially girls' education), caste-differentials in respect of attitudes, teachers' problems, administrative problems, a perspective plan-frame in regard to schooling facilities, pupils'enrolment, teachers' employment, etc. has been prepared. The suggested targets (under low assumptions) for the years 1970-71, 1975-76 and 1980-81 are: 1) enrolment: boys- 92.5, 103.0 and 110.0%, girls- 40.0, 55.0 and 65.0%; 2) teacher-pupil ratio- 1:45 throughout the period; 3) average annual salary of teachers- Rs.1,000, 1,200 and 1,500; 4) cost per pupil Rs.24.4, 29.3 and 36.7; 5) cost per capita - Rs.2.2, 3.2 and 4.5. The main components of cost accounted for in calculations are 1) pupil-teacher ratio, 2) average annual salary of teachers, 3) total direct expenditure as percentage of teacher cost.

72 **BADAMI H D:** Study of relationship between internal evaluation and university examination marks under the faculties of Arts, Science and Commerce. Journal of Vocational & Educational Guidance 1967, 13(2-3), 59-66. 7 ref.

A sample of 300 successful students of 1964 examination was randomly selected from each faculty. Marks obtained by each student in internal evaluation and university examination were collected. Information regarding the reactions towards internal evaluation was also obtained during the interview with the principals, teachers and students. Analysis of the data reveals that: 1) there is no high relationship between internal evaluation and university examination marks; 2) in some of the language papers observed co-efficients of correlation are smaller than those found in other papers; 3) the range of co-efficients of correlation is found better in the Science faculty and to some extent in Commerce faculty but not so in the Arts faculty; 4) there is a clear tendency on the part of various colleges to give unduly liberal marks in internal evaluation; 5) the tendency to give more marks in internal evaluation is observed less frequently in the Science faculty than in others; 6) a majority of the principals and students agree that internal evaluation should be retained.

73 **HILL W H:** Progress of examination reform. Progress of Education 1967, 41(9), 338-44; 41(10-11), 384-91. 16 ref.

A review has been made of the progress since the publication of the Report of the Secondary Education Commission in 1953. Central Examination Unit, now an independent department of the National Institute of Education, has been a landmark in the progress of examination reform. The activities of the Unit had been: 1) development of pools of test questions and and short tests; 2) training of teachers in improved examination methods; 3) training of paper-setters and head-examiners of the Secondary Education Boards and helping them design improved question papers; 4) experiments with improved practical examinations in science; 5) development of internal evaluation procedures for secondary schools. The proposed changes envisage removal of the following drawbacks of examination system and improvement of both measurement value and educational value of question papers: 1) restricting questions to a selected part of the syllabus and allowing wide options; 2) vagueness and ambiguity characteristic of many questions; 3) subjectivity in marking students' answers; 4) different patterns of marking in different subjects. Subjects in which a wide range of marks is used outweigh other subjects in determining the relative standing of students. Steps taken are: 1) inclusion of short-answer questions and objective questions along with essay questions; 2) reducing the number of optional questions and matching carefully alternative questions; 3) reducing the subjectivity of marking by appropriate wording of questions and formulating answers; 4) introducing oral examinations; 5) developing extended programme of internal evaluation; 6) issuing two separate certificates for internal and external evaluation as done by the Rajasthan Board of Secondary Education.

74 MANORAMA DEVI: Examinations in teaching of science - a new approach. Home and School 1967, 8(2), 5-6, 24.

As a sequel to the discussions of the programme produced by the Nuffield Science Teaching Project in the Summer Institute in Physics (Dehra Dun), the influence of examination system on teaching methods has been examined. In the Nuffield course of study, emphasis is on the form of questions used to stimulate, develop and test the students during class hours. No distinction is made between the routine testing and examinations. The questions provided may be grouped as: 1) preliminary questions for stimulating the class for the days' lesson; 2) simple recall; 3) expensive recall to reason out and solve a problem on the basis of previous knowledge; 4) teaching questions which develop further the result, based on some experimental work and establish a new relationship between the parameters used; 5) Freddie Jones and Uncle George type of questions where a situation is created and students are asked to discuss it. All these questions except the preliminary are suitable for examination papers. The formal examinations are held at the end of the five-year course so that the students are not obsessed with examination fear. Suitable adaptation of the course in India has been advocated.

75 MATHUR S S: Assessment procedures at M.Ed. level. Teacher Education 1967, 1(4), 10-17. 2 ref.

A survey of assessment procedures in 24 universities reveals that the three most prevalent practices in respect of written papers are: 1) assessment through external examiners only; 2) assessment through a panel of examiners; 3) assessment of the same paper by two examiners - one internal and one external. For dissertations, the most common practice is evaluation by two examiners - supervisor of the candidate and an external examiner. In some universities the scope of viva voce is limited to the subject of dissertation, or dissertation and term papers in different subjects. Weightage to internal assessment on sessional work is given in 3 universities. No university (except M.S. University Baroda) favours the idea of completely internalizing the examination. The suggestions offered are: 1) examinations by a panel of external examiners (subject specialists) and internal examiners (teachers) in each paper; 2) teacher-made objective tests and essay-type tests in each paper should be used; 3) the teacher-made objective type test should be prepared by external examiner in consultation with the internal counterpart, but may be assessed by the external examiner only; 4) the essay type test should be prepared by the external examiner only and may be jointly examined; 5) the examiners in dissertation should be two - one internal and one external. The thesis should only be graded and separately indicated in the degrees; 6) practical work should be emphasized not only in psychology but in other papers as well and may be examined internally.

76 RAINA T N: Internal assessment - how much dependable. Education and Psychology Review 1967, 7(3), 125-33. 19 ref.

Five studies conducted with teacher-trainees of the Rajasthan University by the author (Teacher Education, July 1963, p.25 and 1965; Education & Psychology Review, January 1966; Gupta K C (M. Ed. Dissertation, Rajasthan University 1961), and Mann S S (M. Ed. Dissertation Rajasthan University 1964) on the relationship between external and internal assessment show that: 1) internal examiners tried uniformly to avoid the lower ranges indicative of failures; 2) standard deviations of the internal assessments are smaller and significantly different from those of the external marks have a wider dispersion which indicates a truer picture of the candidates than the internal assessment; 3) the weaker students in the external examination, in general, benefit more in the internal assessment than the brighter ones in the same examination; 4) the internal marks vary very little while the external marks vary from failure to distinction. These conclusions which conform to many other findings adequately show that internal assessment is not much reliable. The suggestions are: 1) the present type of internal assessment should be done away with; if that is not possible immediately, the marks of two assessments should be declared separately and the candidates would be required to pass separately; 2) the external examination should be improved to make it both valid and reliable; 3) some tools and techniques should be developed for the internal assessment of some factors like literary artistic and cultural interests, and leadership cannot be measured by external examinations.

FINANCE

77 BALJIT SINGH: Resource constraints on education in India. (In his Education as investment. Meerut, Meenakshi prakashan, 1967. 185-205).

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77 BALJIT SING: Resource constraints on education in India. (In his Education as investment. Meerut, Meenakshi prakashan, 1967. 185-205).

Certain estimates of needs and resources and criteria of outlay on education have been discussed. Following suggestions have been made for the mobilization of resources: 1) adopting multi-source finance system for increasing the resources. This will, however, affect the allocative efficiency; 2) making general-purpose equalization grant to States by the Centre. Following variables have to be considered: i) proportion of population; ii) proportion of students in classes I to VIII; iii) proportion of backward class people; iv) share of net domestic product; and v) propor proportion of unemployed graduates; 3) Centre directly sharing with the States the burden of education at all levels by enlarging the central sector. This can be effectively done through U.G.C.; 4) charging fees based on full-cost pricing without sacrificing the principle of equalization of educational opportunity; 5) mobilizing the resources in States either through general taxes or though specific surcharges for education.

78 HARBHAJAN SINGH: Analysis of some aspects of higher secondary school costs and their relationship to quality of education. Indian Educational Review 1967, 2(2), 81-91. 2 ref.

A fairly homogeneous group of 17 schools (government boys' higher secondary schools in urban Delhi) was selected for the study. The three-yearly (1961-62, 1962-63, 1963-64) mean school achievement was taken to represent the index of school quality. The mean was obtained by adding the marks secured by pupils in the final higher secondary examination and dividing the figure by the number of pupils who took the examination. Unit pupil cost was computed in respect of the following 5 categories: 1) instructional (personnel); 2) administrative; 3) auxiliary; 4) co-curricular; and 5) library costs. The data were analysed for 3 years. The conclusions are: 1) the hypothesis that at the existing level of costing a correlation between unit pupil cost, as studied function-wise, and quality of education, as revealed by scholastic achievement in the school final examination, does not exist, is accepted at .05 level of significance; 2) it may not be possible to predict the mean school achievement with the help of these five types of unit pupil costs; 3) other probable intervening variables have to be conceptualized, identified, described, measured and controlled for a more profitable study of the cost-quality relationship.

79 JOSHI M D: Economic aspect of education. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 213-22). 10 ref.

The main reasons for the government to finance and subsidize education are: 1) social benefits desired from education are greater than individual benefits; 2) since returns on education are not immediate, private individuals are not likely to invest an optimum amount. Educational finance has therefore to be considered as a component of public finance. In developing countries attention is not being paid to the creation of human capital based on the wrong assumption that material capital is the only important factor in economic development. In such countries, inadequate resources have to be increased through measures like rationalization of tax structure, elimination of tax evasion, imposing special surcharge on Central and State taxes, and a sizeable amount has to be earmarked for education by balanced reallocation of revenue over various items of expenditure. As regards the distribution of functions among three public authorities, central, state and local, following general principles have been suggested: 1) where the interest of the whole country is involved, the functions and expenditure have to be central; 2) in cases where detailed local supervision is required, regional or local authorities should be entrusted with the function. Education should, however, be included in the Concurrent List.

GUIDANCE AND COUNSELLING

80 CHOPRA S L, CHOPRA R L: Reorganization of the educational system and the need for educational and vocational guidance. Journal of Vocational & Educational Guidance 1967, 13(2-3), 67-73. 16 ref.

The recommendations of various Committees and Commissions since 1882 for the vocationalization and diversification of courses did not produce the desired result because the influence of social and occupational structure on the development of secondary education had been always underestimated. The first step necessary for diversion of students to courses for middle level occupations is to enhance their status in terms of social prestige and economic benefit. For this purpose guidance services should be regarded as an integral part of education, as suggested by the Education Commission, and not merely a special psychological service. For a well-organised guidance system, the prime need is to have estimates of guidance manpower requirements i.e. counsellors, carrier masters, staff for training and in-service training of teachers, and personnel required for the development of tests and guidance material. Manpower planning and providing educational opportunities accordingly would not achieve the desired goal unless right type of students are selected for various courses. A well-organized system of educational and vocational guidance is a prerequisite for the implementation of the Education Commission's recommendations.

81 KAKKAR A: Counselling the emotionally disturbed children. Journal of Vocational & Educational Guidance 1967, 13(2-3), 93-8. 8 ref.

Emotionally handicapped children need counselling more than other children. The most easily identifiable symptoms are failure to learn in keeping with their ability to learn, and concrete items of misbehaviour. Two factors cause emotional disturbances: 1) environmental: over-strictness, lack of affection or over-protection, over-dependence, lack of sex-education etc; 2) personal: discrepancy between self-concept and ideal self-concept. Use of group personality inventories, observation rating scales, anecdotal reports, and sociometric procedure, will reveal the real causes. There are three types of counselling procedure: 1) group counselling - a friendly atmosphere in which a group of emotionally disturbed can explore common problems; the counsellor listens attentively and with understanding, and helps them resolve their problems; 2) educational and vocational counselling - analysing the students' abilities, interests and aptitudes; 3) teacher-counselling, the success of which depends on: a) knowledge of the dynamics of child and adolescent behaviour; b) facts about educational and vocational opportunities; c) skill in counselling techniques; and d) ability to think and act with the student.

82 MEHTA P H, WADIA K A, ODGERS J G: Handbook for counsellors. New Delhi, National Council of Educational Research and Training, 1967. 80p.

The handbook describes in 5 chapters various aspects which constitute an adequate guidance programme relevant to Indian situation: 1) secondary school guidance service; 2) pupil information service; 3) educational and occupational information service; 4) group guidance; 5) counselling service; 6) resources for the guidance programme. There are 9 appendices: 1) minimum programme of guidance for full-time counsellor; 2) suggested readings (30 ref.); 3) guidance journals and newsletters; 4) some agencies publishing occupational information material; 5) some tools for individual appraisal; 6) list of publications of the Central Bureau of Educational and Vocational Guidance; 7) model class talk; 8) pupil information blank; 9) pupil's cumulative record.

83 SINGH K M, LABH SINGH: Study of educational vocational interests of adolescent girls. Journal of Vocational & Educational Guidance 1967, 13(2-3), 109-12. 9 ref.

The purpose of the study was to ascertain: 1) the relationship between the students' choice of school subjects and their educational and vocational interests and 2) the extent of guidance they receive in educational vocational matters. A sample of 250 girls (average age 13.6) of Classes IX and X of Agra District was randomly selected and administered an interest inventory prepared by the authors. The results revealed that: 1) there was lack of agreement between interests and educational vocational choices; 2) financial implications impose severe restrictions on the choice of vocational courses; 3) majority of students had no vocational plans; 4) they did not receive guidance from any quarter; 5) the schools did not provide for guidance and school libraries contained no material on guidance; 6) all the students realized the need for guidance. Following are some suggestions: 1) vocational bias should be given to curriculum and occupational information may be introduced as a separate subject; 2) every school should have a counsellor or a teacher-counsellor; 3) school libraries should possess adequate books on guidance; 4) vocational experience should be provided through cocurricular activities; 5) lectures by experts on guidance should be arranged; and 6) films on the subject should be screened.

HEALTH CARE

84 DEODHAR N S, PENDSE S A: Students' health service (B.J. Medical College, Poona). Maharashtra Medical Journal 1967, 14(4), 277-84.

A comprehensive health check-up programme introduced in 1966 aimed at: 1) stressing the importance of regular health check-up as a part of personal hygiene; 2) acquainting students with procedures of thorough health examination and follow-up programme; and 3) providing opportunities to observe, practise and promote personal health. The newly admitted students (male 131, female 67) were subjected to the following tests and examinations: 1) clinical examination of blood, stools etc. 2) physical measurements; 3) ear, nose, throat and dental examination; 4) general and systemic physical examination; 5) examination of skin and genital organ; and 6) radiograph of chest. These were followed by immunization programme. The health records were then analysed, further investigation carried out whenever necessary, and preventive and curative measures suggested. The data have been presented.

85 PAI D N, VACHHRAJANI B R, VACHHRAJANI R B: Health survey of B.P.M. High School students. Journal of the Gujarat Research Society 1967, 29(3), 177-95.

The survey included: 1) a rapid history taking; 2) height, weight and chest measurement; 3) examination of eyes for any refractive error; 4) ear examination; 5) measurement of blood pressure; 6) nutrition status; and 7) detailed clinical examination of blood, urine etc. A total of 805 students (432 boys and 373 girls) of age group 10-21 was subjected to the survey. The students had defects and abnormalities which would have gone undetected and unchecked, but for this survey. A plea has been made for periodic health survey as it would: 1) lead to early detection of defects and ills; 2) enable evaluation of rates of growth at different age; 3) reveal the lacunae in the health programmes; and 4) provide a basis for future comparison of similar surveys.

HIGHER EDUCATION

86 INDIA. UNIVERSITY GRANTS COMMISSION: Report of the Committee on Colleges. New Delhi, the Commission, 1967. 44p. [Chairman : Dr G S Mahajani].

Following recommendations have been made: 1) 12 years' duration of school and pre-university course; 2) two public examinations, one at the Matriculation stage and the other at the old Intermediate stage; 3) a two-year first degree course of balanced education after 12 years' schooling for those who do not proceed beyond graduation; 4) three-year honours course, besides the pass course; 5) restricting admission to two-year postgraduate courses to honours students; 6) undergraduate course as preparatory to honours and postgraduate course and entering jobs; 7) no further increase in the present load of students in general education which is more a matter of approach than content; 8) arranging tutorials within the existing resources and facilities by drastically cutting down the number of lecture periods; 9) establishment of new colleges only on a planned basis; 10) no affiliation to colleges without the express approval of the university; 11) laying down some minimum standards and conditions of affiliation to be strictly enforced by UGC; 12) liberalization of grant-in-aid rules; 13) no introduction of postgraduate courses in a single college without co-operative assistance from the university and without having a minimum staff of three qualified teachers for each subject; 14) 'autonomous' status short of university (degree-giving) status to selected colleges; 15) encouragement of academic mobility of students; 16) improvement of economic status of teachers; 17) improvement of examination and assessment system; 18) UGC assistance during the Fourth Plan only to those colleges which have shown good results in university examinations, are 5 years old, have fulfilled conditions of affiliation and have a minimum of 500 students; 19) encouraging student unions in colleges and sometimes extending assistance instead of being merely tolerated as at present.

87 KARVE D D: Universities and the public in India. (In Shah A B, Ed. Education, scientific policy and developing societies. Bombay, Manaktalas, 1967. 151-76).

Discusses some of the ways in which public policy, political practice and public opinion in India affect the functioning of universities. The desire for a certificate or a degree from a statutorily established institution is so deeply ingrained in all classes that there is public pressure to lower the standards of the examination system which is already of low standard. The structure of university government in India lends itself easily to intervention by non-academic groups and interests. Since the finance comes from public funds, the representatives of the public exercise influence on universities through the senate or the syndicate. In matters of affiliation, public pressure is exercised, on universities, even if the minimum condition for affiliation is not fulfilled. Another element of external influence is the admission of students into institutions of higher education. The Constitutional provision for reservation of seats for pupils from backward community in institutions of higher education results in admission of less qualified pupils in preference to better qualified ones. Further, pressures are exerted to increase the number of reserved seats on the ground that adherence to the principle of merit in admission would militate against the goal of an integrated casteless society. Members of university senates sometimes advocate lowering of standards of admission. Language controversy provides scope for various non-academic, social and political factors to influence the decision regarding the medium of instruction which is of utmost importance in higher education.

88 KERALA. LAWS, STATUTES ETC.: Kerala University Bill, 1967 (L.A. Bill No. 24 of 1967). Trivandrum, Printed at the Government Press, 1967, 31p.

In the light of the working of the Kerala University Act, 1957 (Act No. 14 of 1957) the University moved Government for amending several sections of the Act. All-Kerala Private College Managements Association and Director of Collegiate Education have also suggested some amendments. Considering these and the recommendations of the committee on 'Model Act for Universities (Ministry of Education), this new Bill has been introduced to revise the 1957 Act. It contains 65 clauses covering the following categories: 1) constitution of the university and its powers;

2) officers of the university (Chancellor, Pro-chancellor, Vice-chancellor, Registrar and any other officers declared as such); 3) authorities of the university (Senate, Syndicate, Academic Council, Faculties, Boards of Studies and any other boards or bodies declared as such); 4) statutes, ordinances, regulations, rules and bye-laws; 5) election to various bodies; 6) finance; 7) miscellaneous. Some provisions relating to government's role vis a vis the university are: 1) prior approval of government for creation of posts carrying salaries of ₨.1000 per mensem or above and also for introducing schemes costing more than one million rupees; 2) maintenance grant from government; 3) auditing of annual accounts by government; 4) power of government to a) inspect the university, b) call for explanation regarding the working of the university; c) take over management of private colleges and acquire such colleges; d) appoint commission to enquire into the working of the university; and e) make rules.

89 LEONARD J P: Charting our course. Journal of Education and Psychology 1967, 25(2), 86-95.

The goal of collegiate education as set forth in the pre-independent days should be redefined in the light of the recommendations of the Education Commission. Having decided the goal following steps should be taken to vitalize the curricula: 1) defining the most needed subject areas which should be served by the college. Postgraduate courses should be avoided unless the college is properly equipped; 2) reforming of curricula should be done keeping the subject area and the goal in view. Integrative process of reorganization and not the additive one should be used; 3) abolishing the pre-university course. Otherwise, it should be integrated into a four-year college programme; 4) extending working hours and eliminating vacations; 5) keeping students busy through assignments; 6) conducting regular tests for internal assessment; 7) making fullest utilization of the school plant and making each school a viable unit; 8) granting autonomous status to selected colleges; 9) relating education to community through work experience and community service programmes. It has been finally observed that the Indian educators are ignorant of the power structure of Indian education and that Indian educational administrators are not bold enough.

90 MALHOTRA P C: Higher Education - the situation. Hitavada 1 July 1967, p.4, Cols. 5-7. words.

A plea has been made for the re-examination of the policy of expansion of higher education keeping in view two factors: manpower needs and competitive demands on the limited financial resources. With the present rate of expansion (10%

per year), the total enrolment in higher education by 1985-86 would be of the order of 7-8 million i.e. more than twice the estimated manpower requirements. Indiscriminate expansion of educational facilities leads to the establishment of economically unviable institutions. Of the 2056 affiliated colleges (professional and non-professional) more than 68.1% and of the 533 professional colleges, 363 had enrolement of less than 300. This has lowered the average standard and quality of education. Democracy demands equality of opportunity, but true education makes for inequality - the inequality of individuality, success and talent. Country's need in education is not mediocrity but individual superiority.

91 SEN T: Universities and national development [address of the Education Minister on the occasion of laying the foundation stone of Dibrugarh University (Assam) on 15 May 1967]. Journal of Education & Psychology 1967, 25(2), 70-5. University in building up the nation. Kerala Sandesh 1967, 10(12), 6-8.

Two new responsibilities have been assigned to the Indian universities: 1) adoption of regional languages as media of education; 2) evolving programmes of continuing adult education for their alumni and for important categories of leadership. Switching over to the regional language medium is a purely academic decision based on sound educational principles, whereas the use of English was a political decision of an alien ruler. In implementing this programme the interests of linguistic minorities would be safeguarded. For continuing education, programmes of part-time education, correspondence courses, extension work, etc. should be developed in a big way. In particular, educating the rural leadership is the responsibility of the university. Since universities are supported by the public exchequer, every university should involve itself deeply in the study of local, regional and national problems and assist in their solution.

92 SHILS E: On the improvement of Indian higher education. (In Shah A B, Ed. Education, scientific policy and developing societies. Bombay, Manaktalas, 1967. 475-500).

A plea has been made for the creation of some 'major universities' by concentrating in them 'critical masses' in a variety of subjects and in clusters of subjects. Certain existing universities which are already relatively outstanding in particular subjects or groups of subjects may form the nucleus of such universities. Two preconditions have been suggested for such transformation: 1) recruitment of students well enough endowed and qualified to benefit from superior training; and 2) recruitment of staff who are intellectually distinguished enough to provide the training. Recruitment of students should be on an all-India basis through a national scholarship examination. A network of relationships between secondary schools and major universities should be developed to ensure regular flow of the most promising students to the national scholarship examination. Students passing out from these universities would eventually become available for recruitment as teachers. For recruiting teachers of exceptional promise and performance considerable modification of appointment procedures would be necessary. A contingency fund should be made available to the Vice-Chancellor to provide more attractive terms to well-trained and well-motivated teachers. A certain amount of competition between various universities is desirable but the limitations of financial resources should be considered. Besides the major universities, suggestions have also been made for the extension of excellence within a university and also among various universities.

93 University freedom /Editorial/: Hindu 31 May 1967, p.6, Col. 1. 510 words.

The new Kerala University Bill, 1967 (see abstract No.88) which seeks to curtail the autonomy of the university by extending governmental control on it, has been criticized. Apart from government's power to control financial matters and to take over the administration of affiliated private colleges, more power has been vested with the chancellor (the Governor of the State) who acts on the advice of the State Chief Minister. The fact that many of the proposed measures are in line with the existing practices in other States, does not alter the basically reactionary character of the proposals which are at variance with the modern trends towards greater academic freedom. All institutions, especially those under private management, should be given the greatest possible freedom to realise their objectives.

94 YAJNIK K S: Recent trends in the reconstruction of undergraduate education in India. Journal of Education & Psychology 1967, 25(2), 113-19.

Considering the needs of students following suggestions have been made for revising the college programmes of study both in content and approach: 1) setting up of student centres in colleges to provide guidance in studies and other personal problems; 2) the course of study should meet at least three requirements of students: a) employment needs; b) opportunity to exercise option from a wide range of subjects according to individual aptitudes; c) preparation for a richer living and effective citizenship of a democracy. The courses should include topics on Indian heritage, political, economic and social problems, impact of science on modern living, and literature and art appreciation; 3) laying special stress on the method of teaching; 4) developing close personal relationship between students and teachers. The teacher through his contact with students should be able to develop a code of conduct for students and a sense of values; 5) accent should be on campus life during college years. At least for the first 2 years students should be placed in hostels to keep them free from political and harmful social influences.

INSTRUCTIONAL MATERIAL AND AIDS

95 GAIND D N: Textbooks and use of resource material. Cenbosec News & Views 1967, 3(2), 6, 20.

The drawbacks of sole dependence of teachers on a single textbook have been pointed out. The use of resource material in such circumstances is imperative. Different types of resource material (publications and visual material) have been listed. Those resource material should be selected which 1) develop intensively the topics dealt with in textbooks; 2) deal with significant topics omitted from textbooks; 3) differ in point of view from those given in textbooks; and 4) are written in an interesting and attractive style. Resource material should be used in proper context when a need is felt for the reinforcement of text. While using the resource material the teacher should indicate its title and provide students with a list of supplementaries. He may employ collateral readings in planning differentiated assignments for the brighter students.

96 MAHESHWARI D P: Textbooks - planning, preparation, production. Bombay, Vora & co publishers, 1966. 125p. 46 ref.

The first chapter discusses the meaning, purpose and role of textbooks. The second chapter suggests that the publisher should 1) determine the demand, needs and desires of pupils and teachers; 2) decide the number of pages, size, and price, and 3) select the author. Some guidelines have been given for entering into agreements with authors. Planning by authors involves the following: 1) study of the syllabus; 2) knowledge of the purposes and functions of the books; 3) knowledge of students' needs, teachers' background and the educational goal of the country; 4) survey of the existing textbooks and supplementary material; 5) knowledge of the latest educational research and studies; 6) collection of material, determination of priorities and organization of the material; 7) determining content and construction of an outline. In writing, (chapter 4) the three main considerations should be: 1) the subject matter; 2) the presentation; and 3) the user. Preparation of the manuscript, costing and some other technical details have been discussed in the fifth chapter. Suggestions for the proper use of textbooks by teachers and pupils have been given in the last chapter.

97 VIDYLANKAR A N: National integration and teaching of history. Modern Review 1967, 122(1), 39-45.

The present textbooks of Indian history are still based on the British versions which present a disjointed picture of India where different races and communities built up mutually exclusive social and cultural life. They have totally ignored all other values in Indian history and solely emphasized political conflicts. Instead of dividing Indian history into natural ages and periods determined according to the social and political evolution it was divided into periods of so-called 'communal rule'. Some of the shortcomings are: 1) close relationship between the Arabs and Indians from 7th century till the invasion of Ghazni has been completely ignored; 2) though the word 'Rajput' did not come into existence before the 16th century, "Rajput period", has been introduced between the Hindu and Muslim periods; 3) no efforts are made to trace the correct Indian names and the erroneous forms are still used; 4) though the present Indian culture is an admixture of Aryans and Dravidians, the books do not present an integrated picture. In view of such inaccuracies and misrepresentations pervading the textbooks, a plea has been made to rewrite Indian history depicting the proper and correct picture which would evoke emotions of nationalism among students.

PART-TIME EDUCATION

INDIA. MINISTRY OF EDUCATION: Part-time courses of study as pilot projects in schools - a proposal by the Union Ministry of Education. Indian Journal of Adult Education 1967, 28(9). 14.

In accordance with the recommendations of the Education Commission and the Committee of Members of Parliament on Education, introduction of a pilot project from the 1968-69 academic session has been proposed. Three levels of part-time education have been envisaged: 1) Primary: the duration of the course should be one year and the enrolment should be confined to the age-group 11-17. There should be 250 first level centres in each State; 2) Post-primary: the duration may be 3 or 4 years depending on the number of working days per year. Each State should have 200 centres; 3) Post-middle: intended for those who have studied up to the middle school stage to enable them to pass the Higher Secondary Examinations. Duration may be 3 or 4 years. Forty centres should be organized in each State. No expenditure on buildings and equipment should be incurred and the existing facilities should be availed of. Free textbooks and writing material, etc. may be provided only at the first level. Financial provision should be made to remunerate the part-time teachers and to meet contingencies. Cost estimates for organizing the centres during the Fourth Plan period have been given. Physical education and craft activities should be excluded from both post-primary and post-middle level courses.

POLICY AND PLANNING

99 INDIA. COMMITTEE OF MEMBERS OF PARLIAMENT ON EDUCATION (1967): Report - national policy on education. Delhi, Ministry of Education (Govt. of India), 1967. vi, 56p. [Chairman Dr T. Sen, Education Minister].

The Committee was constituted by the government of India to: 1) consider the report of the Education Commission (1964-66); 2) prepare the draft of a statement about the national policy on education; and 3) identify a programme for immediate action. The Committee disagreed with 3 of the major recommendations of the Commission: 1) creation of 'major' universities and upgrading 10% of institutions at all levels; 2) the policy of selective admission to higher secondary and undergraduate courses; 3) introducing some new administrative structures and changes. (This would lead to increased bureaucratization and expenditure). Recommendations concerning transformation of the educational system are: 1) promotion of national unity through education; 2) establishment of neighbourhood schools; 3) adoption of regional languages as media of education at all stages; 4) compulsory study of two languages (either Hindi or English as compulsory) in schools; 5) promotion of study of Hindi and Sanskrit; 6) emphasis on science education and research, education for agriculture and industry, work experience and character formation. Recommendations for equalization of educational opportunities are: 1) provision of free and compulsory education up to the age of 11 and gradual extension of the facility up to the age of 14; 2) ten-year school education, 2 years' higher secondary education and three-year first degree course with adequate provision for diversification and vocationalization at appropriate stages; 3) rigorous admission policy only at the postgraduates level; 4) facilities for part-time and own-time education; 5) liquidation of illiteracy and 6) promotion of education for women, backward communities and handicapped. Recommendations for qualitative improvement are: 1) improvement of teacher status; 2) adoption of new methods of teaching; 3) enrichment of curricula; 4) examination reforms; 5) nationwide programme for institutional improvements; 6) student welfare services and scholarships. With regard to organization and administration the points discussed are: 1) preservation of autonomy of universities; 2) promotion of voluntary educational efforts, protection of institutions conducted by the minority community; 3) the responsibilities of Local Authorities and the Central and State governments. A sixteen-point programme for immediate action is suggested within the broad framework of these recommendations. Nine dissenting notes are attached.

100 INSTITUTE OF APPLIED MANPOWER RESEARCH, NEW DELHI: Sectoral study of engineering manpower requirement up to 1976 based on output, investment and workforce. New Delhi, the Institute, 1967, ii, 43p. 7 ref.

The objectives were to examine 1) whether in the context of the information available in India, the sectoral study is feasible; 2) how the results compare with those obtained from global studies; 3) how the results of such study based on three factors (output, investment and work-force) compared with those obtained from single-factor approach. The findings are: 1) although the paucity of sector-wise data on engineering employment (1955-56 to 1964-65) is a handicap, the study is worthwhile and feasible. Data for a longer period on a comparable basis could produce better results; 2) conceptually, the superiority of the sectoral approach over the global approach is unquestionable, but comparison of the results of the two approaches would lead to the improvement of the results of each approach; 3) the use of three factors provides six ratios (output-engineer, investment-engineer, engineer-work force, output per worker, investment per worker, and investment-output) and facilitates checking the consistency of projections with the economic system as a whole. The six sectors studied are: mining, manufacturing and utilities, construction, trade and commerce, transport and communications, educational services, government administration, agriculture and other services. Estimates have been worked out for 1970-71 and 1975-76.

101 MAHARASHTRA. PLANNING DIVISION. MANPOWER WING: Utilization pattern of educated persons in Maharashtra State during third Plan. Manpower Journal 1967, 3(1), 92-139.

A survey of employment pattern of graduates, postgraduates and diploma holders in technical subjects (for 1959, 1961 and 1963) was undertaken with a view to get an insight into the relationship between employment pattern and educational expansion. Questionnaires were addressed to a sample of 4729 graduates from a selected 135 institutions. After preliminary sorting of the 1287 replies received, 1258 replies representing 9 faculties (Engineering, Technology, Medicine, Agriculture, Arts, Commerce, Science, Law and Education) were analyzed. Results have been presented under the following heads: 1) utilization pattern (sectoral, industrial, occupational); 2) levels of employment and unemployment;

3) employment particulars (channel of recruitment, employment status, time lapse before securing first employment, level of earnings, migration from the State); 4) suitability of employment of engineers and technologists. Some general conclusions are: 1) graduates in professional faculties got employment appropriate to their training and qualifications. In the case of faculties like Commerce, Law and Arts the relationship between education and employment became progressively less defined and often education and employment were unrelated; 2) incidence of unemployment is more in Arts, Commerce and Law (12.2%) as compared to other faculties (3.6%). Higher rate of unemployment (9%) among medical graduates is significant; 3) relatively, more unemployment and larger time lapse before securing the first employment were noticed in the case of graduates in arts, commerce and law. They also constitute the majority in the lower salary range; 4) there is a dearth of technologists; 5) of all the faculties, higher studies were pursued in the Arts faculty.

102 MITRA M: 'National pattern' of education - some aspects. Amrita Bazar Patrika 1 August 1967, p.6, Cols. 4-7. words.

Certain aspects of Education Commission's recommendations are discussed. Completion of lower primary stage at class V (i.e. at the age of 11) would lead to one year's forced idleness for those who would not pursue further studies, because existing labour laws prohibit employment of workers below 12. This difficulty can be obviated if primary education is made compulsory up to the age of 14. Suggestions for a national pattern of education are: 1) terminating the secondary stage with class X; 2) merging the self-contained unit of classes XI-XII with the university level; 3) introducing specialization at this stage with only two streams (humanities and sciences), with option for a wide choice of subjects; 4) abolishing the eleven-year school stage with its rigid system of diversification. At the university level there should be: 1) two-year pass course; three-year honours course; and a two-year postgraduate course. The honours graduates would be eligible to join the second year. Study of two languages - mother tongue and English is recommended while agreeing that there is no escape from the three language formula in the long run. Other suggestions are: 1) autonomous Boards for primary and secondary education; 2) converting all affiliated colleges to constituent colleges of universities; 3) a grants committee for each State; 4) functioning of local governing bodies of institutions only in advisory capacities.

103 **NAYAR D P:** Effective utilization of resources for educational development. Indian Educational Review 1967, 2(2), 112-27. 13 ref.

Since education is an investment its effective planning to maximize return calls for avoidance of wastage. The essential considerations for the planners to minimize wastage are: 1) avoiding two extremes: stagnation and headlong change. Carefully prepared proposals for changes should be evaluated through pilot projects before implementation; 2) deciding the order of priorities from the essentiality point of view; 3) enlisting the cooperation of people in matters like school building, equipment and mid-day meals; 4) streamlining the administration. Before introducing any change, the administrative capacity should be carefully assessed and steps taken to prepare and train teachers and administrators; 5) continuous evaluation of the educational programme at all levels - block, district, State and national; 6) setting up a permanent national commission to assess the overall relationships of education with social and economic development; 7) full utilization of the services of teachers by increasing the working days of schools; 8) introducing the latest curricula and using the latest pedagogic methods; 9) full utilization of the available building space and equipment; 10) determining the optimum size of the school. Large-sized institutions are economically advantageous; 11) linking educational development with manpower needs.

104 **RAY P:** National policy of education. Science and Culture 1967, 33(6), 247-52.

The most controversial problem is the medium of instruction and the study of languages. The rational and practical proposition would be adoption of the three language formula and the use of regional languages as media of instruction, retaining the English scientific terms and nomenclature. Two factors stressed are: 1) science orientation in education; 2) properly trained teachers conscious of their noble profession, endowed with a spirit of service and sacrifice and devoted to pupils' physical, intellectual and spiritual development. Universities serve as mere factories for producing job-seeking graduates. Failure to obtain degrees leads to frustration and the consequent student indiscipline. University education should illuminate the intellect, ennoble character, help develop moral and spiritual values of life and make students adopt a mission in life. The present system of mass examinations should be replaced by institutional examinations and viva voce examinations. Creation of 'major universities' recommended by the Education Commission (1964-66) has been opposed because of paucity of qualified persons. The programme of work experience for students in agricultural farms during vacations should be implemented immediately.

105 **SAIGAL J C:** Use of international comparison in manpower forecasting. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 172-84). 10 ref.

Measuring the future optimum pattern of manpower requirements involves 3 factors: 1) specification of technological possibilities like productivity, capital-labour ratio and proportion of total labour force with a particular category of skill to be employed in the sector; 2) estimation of changes of the technological factors over time; and 3) prediction of relative prices of factor-inputs over time. Inter-country comparison, at a given point of time, of the relationship of productivity and manpower requirements may not reveal progress in technology because of the various methods employed at a fixed point of time. Time-series data for a country may not suffer from this deviation. The problem of supply effects on manpower requirements reflected at two levels (relationship between economic output and the occupational structure of labour force and relationship between occupations and their educational requirements) has been discussed. The analysis of various conceptual and statistical limitations in this field leads to the conclusion that in the absence of any precise information, the demand-dominated manpower approach is preferable. The problems relating to the determination of the relationship between occupations have also been discussed. Once the data on education and occupation for a number of countries at different levels of productivity are available, it may be possible to correlate the education pattern of the labour force within each occupation with the productivity level. It may also be possible to assess what portion of the variance among countries in the educational structure of labour force within each occupation, is explained by differences in productivity levels.

106 **SHAH A B:** Concept of a national system of education. (In his Planning for democracy and other essays. Bombay, Manaktalas, 1967. 179-86).

The concept should fulfil cultural, economic and social objectives. Some guidelines for the formulation of a national policy are: 1) extending fullest possible autonomy to educational institutions; 2) while majority of educational institutions should meet the popular demand for education, some institutions should be created for the gifted pupils; 3) economic objective of a national system would imply a more conscious planning of educational expansion. Liaison between the educational system and agencies for economic development should be established; 4) social objective of education poses only the problem created by the heterogeneity of the Indian societies because of the absence of a strong desire in the constituent groups to live together; 5) national system should be rooted in the Indian tradition. This needs emphasis only on these elements which are in harmony with new goals of national endeavour.

107 SINHA J N: Educational planning for optimum manpower supplies. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 157-71). 5 ref.

The links of casual nature which exist between educational attainments of workers and per capita income have been discussed and in this context the nature of relationship between these two variables was studied with Indian data. The analysis indicated a systematic increase in educational inputs with rising per capita income. The close association between workers' education and income provides a reliable basis for regressing education on per capita income. The conclusions are: a fair measure of confidence may be placed on the direct method of deriving targets for educational standards among workers from changes in the size and structure of output, given the existing education-coefficients of output. The alternative method of obtaining occupation-coefficients of output and then translating them into educational requirements seems more systematic, but considering the heterogeneous nature of occupational categories for which data are available, the scope for skill-substitution within similar categories and the different levels of education among workers on the same jobs, the precision claimed for this method may be more formal than real.

108 YOUNG R C: Educational planning and economic criteria in India's context. (In Baljit Singh, Ed. Education as investment. Meerut, Meenakshi prakashan, 1967. 79-101). 34 ref.

The problems inherent in the productivity approach to investment in education have been discussed. Educational plans should not be based upon some intuitive percentage of GNP and productivity of education. Likewise, enrolments should not be based on some rate of expansion. Instead, adoption of a more productive programme has been suggested, which involves analysis of country's manpower needs and then deriving the educational requirements on the basis on a comprehensive economic plan. Following comments have been made on India's educational planning: 1) educational plan should be framed in the context of the economic plan; 2) educational system has failed to adjust the curriculum to the economy; 3) the problems of secondary and higher education, particularly the latter, lie not so much in the area of expansion as in quality; 4) the primary education system should not only ensure an adequate supply of well-trained entrants to the secondary system but should also be aimed at modernizing the skills of traditional, pre-scientific, village-oriented but urbanizing people. The officials should be able to gather sufficient political strength to enable the development of a more productive educational system.

109 **CHACKO C**: Why I teach reading and how I teach it. NIE Journal 1967, 1(6), 49-52.

The important aims of reading instruction in schools are the development of reading skills and abilities and permanent interest in good literature. A coordinated programme with four inter-related facets of reading in action should be planned. The facets are: 1) systematic group and individual instruction to develop basic habits and skills in reading, and instruction in specific as well as general reading abilities; 2) development of a positive attitude toward reading good books, magazines and newspapers; 3) helping children to use printed material not only for fact-finding but also for interpreting and organizing facts; 4) enriching child's creative skills, the stress being on reading applied to personal needs and deeper understandings. A combination of methods should be used for teaching reading rather than an exclusive use of any one method. Cognitive as well as appreciative aspects of reading should be stressed from the beginning. Reading instruction should be closely integrated with the development of other language arts.

110 **MUKHERJEE B N, SINGRU M M**: Development of a reading comprehension test in Marathi for children of second to fourth grades. Journal of Vocational and Educational Guidance 1967, 13(2-3), 98-108. 7 ref.

Outlines the procedures followed in developing a silent reading comprehension test in Marathi. After a rigorous item-analysis process followed by a few pilot studies, 28 items were selected from a pool of 80 items. Excepting two items, the rest showed a satisfactory amount of psychometric precision, item-total correlation and item-validity. The corrected split-half reliability and the Kunder-Richardson reliability (on analysis of records obtained from 134 pupils) turned out to be .954 and .94 respectively. The repeat reliability over an interval of one month was estimated to be .91 for a sample of 60 pupils. Loevingers' coefficient of homogeneity was found to be .48 on analysis of records obtained from a sample of 65 pupils in addition to 135 pupils (60 third graders and 75 fourth graders). Studies on concurrent as well as predictive validity yielded results in favour of high validity of the test. Two further validational studies revealed: 1) a close relationship between intelligence as rated by teacher and the scores in the test; 2) correlation between socio-economic status and reading comprehension is not as high as the correlation between intelligence and reading comprehension; and 3) the test-retest reliability of the word fluency test was estimated to be .71.

111 **SRIVASTAVA B D:** Teaching of reading English to beginners. Naya Shikshak, 1966-67, 9(2-3), 224-7.

The order of teaching language skills should be: listening, speaking, reading and then writing. All the new structures, and words of a lesson should be taught before the lesson is actually read. The first steps in reading may be taken even at the time of the actual oral teaching of the new linguistic material. Immediately after a sentence pattern has been orally practised in different situations, a substitution table may be given on the board and every student may be required to read aloud two or three sentences from it. Later, the students may be asked to frame sentences using their own substitutes from the table provided. At the initial stages reading may be done aloud to ensure correct pronunciation, pauses and intonation. As the students advance, there should be more emphasis on silent reading with comprehension. They should be trained in reading silently with both speed and comprehension, with correct eye movements and without actual vocalization.

RURAL EDUCATION

112 **KAMAT A R:** Education in Gulumb. Indian Educational Review 1967, 2(2), 13-35.

Presents an account of the growth and development of the village primary school (started in 1887) and the progress of literacy and education in Gulumb (Satara District, Maharashtra) in the context of the educational policies of the Government of India. The account is based on two comprehensive surveys (1942-43, and 1957-58) and an ad hoc investigation conducted in 1966. Out of the total population of 2,060 about 80% are Marathas and allied castes, about 10% scheduled castes and 10% other castes. In analyzing the data, education of women and backward community, impact of compulsory education introduced in 1946-47, and the change in occupational structure have been highlighted. The study leads to the conclusion that the educational progress already attained has considerably affected the traditional pattern of life and human relationships in rural households and in village society.

113 DIN DAYAL: Public school of India - boon or bane. NIE Journal 1967, 1(6), 25-8.

The special features of public schools are: 1) emphasis on the spiritual union of mankind; 2) a family atmosphere because of the house and prefectorial system; 3) compulsory games and other sports activities; 4) opportunities for social service; 5) co-curricular and cultural activities; 7) 6) emphasis on academic attainments. Until the existing gap between public schools and State-managed schools is bridged, such private venture in education should be encouraged. Instead of abolishing public schools, some of which have a glorious tradition of academic excellence, efforts should be made to establish State-sponsored schools, and allow both to function through healthy competition. The Indian Public Schools Conference has been urged to extend its membership to other high level schools irrespective of the nature of management to break the existing isolation of public schools and to allay current fears that public schools are creating a caste system in education.

114 JAMES R S: Public school in the Indian community. NIE Journal 1967, 1(6), 20-4.

The public schools are defined as boarding schools, drawing students from a wide area and mostly run on private funds. Their advantages are: 1) flexibility of time-table and opportunity to build a wider and more inclusive community life than a day school can encompass; 2) non-academic work such as swimming, games and photography is given as much importance as academic work; 3) the school community contains a variety of persons of different ages, abilities and backgrounds; 4) the students have a stable, continuing and reliable system and the various offices in the houses to which boys are allotted, give opportunities for assuming increased responsibility. The present controversy over the public school is not based on educational principles but on social and economic problems. It is suggested that more public schools should be set up and the features of the public school system should be introduced in State-managed schools. For equalization of educational opportunities, a public school should be established in each district centre by the State itself and two or more such schools may be set up in every town or city according to the need to enable the best pupils from rural areas and other schools to join them under a liberal system of scholarships. Attempts should be made to indianize more schools.

115 **JOHN V V**: School and the community - summing-up. NIE Journal 1967, 1(6), 59-62.

Neither of the two arguments is consistent with the democratic ideal of providing good education to all: 1) if good education cannot be provided to all, at least 'some sort of education' should be given to them and 2) because of the impracticability of giving good education to everyone, a selected few should be given such education. An educational system should be devised which would ensure educational expansion without sacrificing quality, offer maximum challenge to the ablest. Striving towards such a system needs a continuous national endeavour. Development of a deeper relationship between the school and the community in this context has been emphasized. They should identify themselves with each other in the two-fold pursuit of social justice and enrichment of individual lives. For securing these ideals independent schools and other schools of any special category need not be denounced, but the community efforts should be directed towards the improvement of the common schools.

116 **MOUNTFORD D R A**: Public school - a victim of ignorance. Hindustan Times 24 August 1967, p.7, Cols. 4-6. 1900 words.

Both protagonists and critics of public school are ignorant about its contributions to the community. While there is a tendency to equate expensive education in public schools with good education, criticism of public schools are also full of contradictions. Public schools are frequently accused of promoting snobbery but at the same time demands are made for admitting students strictly on merit, irrespective of the socio-economic status of the pupils. This means that the system of admission rather than type or quality of education is being condemned. The allegation that Indian culture and heritage are neglected in public schools is also not correct. These critics consider Indian culture synonymous with Vedic culture. It is a futile attempt to ignore the impact of other cultures including Western culture on India. It has, however, been agreed that public schools need reform. The complacency and conservatism of public schools should be removed and they should be subjected to enriching influence of progressiveness.

117 **NAGARKAR D D**: Private tuition classes. New Concepts 1967, 1(4), 89-91.

The social and academic factors responsible for the present growth of private tuition classes are: 1) lack of congenial reading atmosphere in the pupil's homes; 2) lack of proper attention of parents towards the education of their children; 3) emphasis on examination. The private tuition classes, instead of extending help to students, only make them learn selected topics mechanically to enable them to pass examinations. Unless a revolutionary change is effected in the educational system, both in contents and methods, private tuition classes will continue to thrive.

118 SAPRA C L: Common school system and the neighbourhood schools. NIE Journal 1967, 1(6), 10-13.

Following comments have been made regarding the recommendations of the Education Commission on achieving the goal of the common school system: 1) eliminating discrimination between school teachers working under different managements is not possible due to limitations of funds and the problem of fixing priorities; 2) instead of providing tuition-free education at the school stage, a scheme based on the principle of 'paying-capacity' of parents should be introduced. Alternatively, an educational cess may be levied; 3) integrating the roles of all types of managements for ensuring minimum conditions for successful functioning of educational institutions may not be feasible because the expenditure involved is prohibitive; 4) in metropolitan cities the neighbourhood school plan would not succeed unless the entire socio-economic structure is changed. The Commission's recommendations do not imply abandoning the independent public schools, which can set examples of higher educational standards. The Commission has not suggested measures to overcome the two problems involved in the implementation, of its recommendations on common school and neighbourhood schools: 1) meagre financial aid, and 2) indirect resistance from privileged classes. The recommendations on neighbourhood school plan aimed at removing segregation between schools for the privileged and the underprivileged loses much of its importance because all rural students and urban students are already attending such schools.

119 THOMAS K I: Public school - boom or doom? Hindu 24 August 1967, p.6, Cols. 4-8. 1950 words.

The demand for liquidating public schools and excluding their products from all India competitive examinations has been deplored. The attitudes of the successive Education Ministers towards these schools also differ. While some favoured their retention and further promotion some are opposed to the concept of such schools. The distinguishing qualities of public schools are: 1) adequately equipped and manned by efficient staff; 2) free from external control and influence; 3) small classes ensure individual attention; 4) they attempt at developing character and well-integrated personality; 5) they encourage community living. The public schools are not alien to Indian tradition. It is strange that schools run on public school model, but called 'ashram' or 'vidvalaya' are not subjected to any criticism.

120 DORAISWAMI S: Summer Institutes programme. School Science 1967, 5(3), 274-7.

Presents extracts from the Report of a Contract Education Project for Summer Science Institutes for Secondary School Teachers in India. Forty-three institutes were held in 1966. Out of the 1,516 secondary school teachers who participated in 39 institutes held under the auspices of the T.C.C.J team (data not available for four institutes held in the Regional Colleges of Education), 269 were biology teachers, 381 chemistry teachers, 423 physics teachers and 443 mathematics teachers. This year PSSC, CHEMS, BSCS and SMSG materials were used in the physics, chemistry, biology and mathematics institutes, respectively. The effect of summer institutes would be lost unless drastic changes are made in the present system of science education. Evaluation of the institutes by the participants revealed: 1) biology - laboratory work and group discussion were most valuable, whereas a negative feeling was expressed towards lecture presentation at six of the institutes; 2) chemistry - laboratory work along with pre-laboratory and post-laboratory discussions were valued most. It was suggested that school laboratories should be properly equipped and the syllabus revised; 3) mathematics - discussions and SMSG programme and modern approach to algebra and geometry were appreciated. Assistance was requested in the field of books; 4) physics - laboratory experience and films and discussions were considered helpful. Other suggestions pertained to revision of the syllabus and examination system.

GARG J M: Improvement of science education in secondary schools. Rajasthan Board Journal of Education 1967,3(4) 48-51.

The four causative factors for the deterioration of the standard of science education in schools are: 1) difficulty in securing science teachers; 2) inadequate laboratory equipment; 3) lack of suitable textbooks; 4) early specialization. For avoiding wastage in science education and the disadvantages of early specialization, it has been suggested that the courses in existing compulsory subjects should be more broad-based and only six subjects (general science, social studies, elementary mathematics, Hindi, English and a third language) should be taught in all instead of the existing six compulsory subjects and three optional ones. Specialization should begin in class XI and not at class IX. Other suggestions for the improvement of science education are: 1) the schools should not be bound by a dead uniformity of courses; 2) every school should be provided with funds for undertaking visits which show science in action; 3) every school should have a science museum of its own; 4) every school should be equipped with audio-visual aids; 5) the schools teaching biology as a specialised subject should have their own biological gardens.

122 JOSHI A C: Improving science education. Vigyan Shikshak 1967, 11(1), 5-15.

Discusses three main factors in the development of science education in schools: 1) rejuvenation of teachers' knowledge; 2) promotion of talent; and 3) improvement in course content. Summer institutes, follow-up centres, refresher courses run throughout the year, and correspondence course would help update teachers' knowledge. Requisite changes in the organization of schools and evaluation techniques should be made to enable teachers to make use of the knowledge gained in these courses. Some selected schools should adopt the new curricular material on the understanding that they would have separate examination papers. The coverage of talent search programme of NCERT should be extended by at least five times and steps should be taken to publicize the scheme in rural areas. The selection procedure should be judicious combination of teachers' assessment through observation of students' work in science clubs and competetive science fairs and objective tests, and interview. The curriculum should be drastically revised, incorporating all the new developments in science. Consequently, the teacher training programme should also be modified.

123 SHAH A B: Science education in India. (In his Planning for democracy. Bombay, Manaktalas, 1967, 211-17).

The three-fold objective of science education at the university stage should be to: 1) give the student an insight into the historical growth of science; 2) make him understand the method which has made this knowledge possible and indicate how the method can be applied to social problems; 3) teach him basic findings and major techniques of his discipline. Consequently, there would be two types of courses in science: 1) a general integrated course in the major theories of natural science and in the methodology of science for all students and 2) a strictly subject course, optional as at present. The minor subjects should, however, be designed with their instrumental role in view as preparatory to specialization. The failure of the present three-year integrated degree course at the pre-university level has been attributed to the partial implementation of the relevant recommendations of the Secondary Education Commission (1955) based on the Report of the University Education Commission (1949). It has been suggested that: 1) either the U.G.C. or any of the universities should appoint a committee to go into the working of the three-year degree course; and 2) teacher-orientation programmes should be organized before introducing general education courses.

SECONDARY EDUCATION

124 **INDIA. MINISTRY OF EDUCATION:** Reconstruction of secondary education - recommendations of the Central Advisory Board of Education, the Education Ministers' Conference, and the All-India Council for Secondary Education. New Delhi, the Ministry, 1967. v, 109p.

The important recommendations made up to December 1965 have been grouped under 16 headings: 1) teachers; 2) reorganization of schools; 3) curricula, medium of instruction etc.; 4) cocurricular activities; 5) examinations; 6) experiments, equipment etc.; 7) girls' education; 8) health services and physical education; 9) textbooks; 10) fees; 11) vocational guidance; 12) extension services and regional seminars; 13) discipline; 14) school hours and admissions; 15) establishment of commissions and committees; 16) miscellaneous. Each recommendation is followed by the abbreviated name of the recommending body.

SOCIAL EDUCATION

125 **SINGH B N:** Evaluation of health and social education programmes. (In Das Gupta S, Ed. History of Rural development in modern India. Vol 1. New Delhi, Impex India, 1967, 365-82).

As assessment has been made, among others, of the peoples' involvement in the social education programme of the Etawah Pilot Project introduced in October 1948 by Albert Mayer, an American architect. The project covered an area of 64 villages around Mahewa, 8 miles from Etawah in Uttar Pradesh. The assessment was based on information elicited from household heads and village leaders. Although 262 respondents knew that adult literacy classes were held in their villages only 18 participated as learners; 6 worked as teachers. As regards follow-up of adult literacy programmes: 1) 50 indicated that community centre exists in the village; 2) 20 indicated that books are received in the centre from circulating libraries; and 3) 40 indicated that drama or film shows are held.

126 **SINGH B N:** Social education. (In Das Gupta S, Ed. History of rural development in modern India. Vol.1. New Delhi, Impex India, 1967. 292-333).

A programme of social education was designed and implemented as part of the Etawah Pilot Project for rural reconstruction (initiated in 1948 by Albert Mayer, an American architect). The aim was to raise the educational and social awareness of the rural population in order to make them participate in developmental programmes and promote social cohesion, community feeling, and self-reliance. The following tools were used: 1) adult literacy; 2) library and community centres; 3) drama and other traditional media; 4) film shows; 5) kisan mela [agricultural fair]; 6) study tours. Working with each tool has been elaborately described and in the light of experience gained suggestions have been offered on: 1) content, duration and time for literacy classes; 2) follow-up programme in literacy work; 3) problems of suitable literacy teachers; 4) subject distribution of books to be acquired for libraries; 5) overcoming mechanical problems involved in film shows; 6) conducting study tour; 7) agricultural fair.

SOCIO-ECONOMIC STATUS

127 DEODHAR N S, JOGLEKAR G V, BALWANI J H, TOLTE D T, RANGNATHAN H N: Socio-economic survey of medical students. Indian Journal of Medical Education 1967, 6(3), 141-54. 2 ref.

Presents a survey of some important socio-economic characteristics of 733 students of B.J.Medical College, Poona. The information collected pertained to the following aspects: 1) age and sex; 2) marital status; 3) extra-marital and pre-marital sex experience; 4) practices of masturbation; 5) smoking and gambling; 6) drinking of beverages; 7) hobbies; 8) previous academic qualifications; 9) impression about own studies; 10) dietary habits; 11) impression about own state of health; 12) extra-curricular activities; 13) leadership; 14) friendship; 15) residence; 16) travel experience; 17) source of financial support; 18) impression about economic status of the family; 19) income, size and type of family; 20) education and occupation of parents; 21) students having a doctor in the family; 22) place, type, and ownership of residence; 23) home amenities; 24) type of family living; 25) social and religious customs; 26) reasons for taking up medical education; 27) views on medium of instruction in medicine; 28) compulsory military training; 29) compulsory government service; 30) nationalisation of health services; and 31) family planning. Periodic studies of this type are recommended.

SPECIAL EDUCATION

128 INDIA. DEPARTMENT OF SOCIAL WELFARE: [Education of the backward classes and physically handicapped]. (In its Report 1966-67, New Delhi, the Department, 1967. 10-15, 32- 7.)

The spread of higher education among scheduled castes and scheduled tribes during the three Plans registered a marked rise. This has been made possible through the increased number of scholarships: scheduled tribes - 54,74,5 post-matric scholarships (25,596 in the 2nd Plan) were awarded during the Third Plan costing Rs.25.3 million. For 1966-67, the outlay is Rs.5.5 million; b) scheduled castes - 3,15,358 Post-matric scholarships were awarded in Third Plan (Second Plan 1,61,472), the total cost being Rs.142.1 million. The outlay for 1966-67 is Rs.25.9 million. A training centre for the guidance of students intending to take administrative services examination has been started in Madras. For the physically handicapped, 1,876 scholarships were awarded during the Third Plan period (Second Plan: 659) valued at Rs.0.7 million. The estimate for 1966-67 is Rs.0.2 million. There are 115 schools for the blind, 73 for the deaf, 51 for the mentally retarded and 23 for the orthopaedically handicapped. A national centre for the blind had been established in Dehra Dun. Other provisions for the blind are: 1) training centre with workshop for adult blinds in Dehra Dun; 2) Braille literature in Hindi and other major Indian languages; 3) a workshop for manufacturing Braille appliances; 4) a model school for blind children; 5) a National Library for the blind (Dehra Dun); and 6) three training centres for the teachers of the blind in Bombay, Delhi and Narendrapur (W. Bengal). For the adult deaf, a training centre was set up in Hyderabad in 1962. The educational facilities provided for the mentally retarded are limited. The first step had been the establishment of a school in 1964 in New Delhi. Special employment exchanges exist for the physically handicapped.

STATISTICS

129 EASTERN ECONOMIST: Education. (In India's progress since independence - a statistical bird's eye views 3rd ed. New Delhi, Eastern Economist, 1967. 97-104.)

Following statistical tables are presented: 1) State-wise spread of education; 2) progress of school education (by level) - schools, enrolment, teachers, percentage of trained teachers, average annual salary per teacher, pupil-teacher ratio, and annual cost per pupil; 3) schools for vocational and technical education - number, enrolment, and expenditure. Schools for teacher training - number, enrolment and expenditure; 4) colleges for arts and sciences - number, enrolment, expenditure, teachers, average annual salary per teacher, pupil-teacher ratio, and annual cost per pupil; 5) colleges for professional education - number, enrolment, and expenditure. Teacher education colleges - number, enrolment, expenditure, and annual cost per pupil; 6) universities, boards and research institutions - number, and expenditure; 7) growth in educational expenditure; 8) expenditure on education by objectives; 9) expenditure on education by source; 10) spread of literacy; and 11) educational expenditure as percentage of national income.

130 NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING, NEW DELHI: Second All-India educational survey. New Delhi, the Council, 1967. xxiv, 500p.

Presents the results of the first phase of the survey covering the whole of India except Nagaland, NEFA, Andaman & Nicobar Islands, Lahul and Spiti (Punjab) and Mizo Hill Districts (Assam). The objective was to identify and enumerate: 1) distinct habitations; 2) primary, middle and secondary schools; 3) habitations with provision for educational facilities at primary, middle and secondary stages; 4) habitations without such facilities. The survey was also intended to provide data on the following aspects of school education: 5) distances at which educational facilities at the various stages are available for each habitation (under 4 above) in different population slabs; 6) distribution of primary, middle and secondary sections and enrolment in these sections according to number of teachers and classes in a section; 7) distribution of these sections according to number of teachers and enrolment in each section; 8) class-wise enrolment in schools with different sections; 9) distances which children walk from their school-less habitations to schools in neighbouring habitations; 10) distribution of teachers in primary middle and secondary sections according to qualifications; 11) enrolment in different classes at primary, middle and secondary stages; 12) distribution of untrained teachers according to age and teaching experience; 13) distribution of schools according to management and nature of ownership of school buildings; and 14) qualifications of science teachers in secondary schools and the available laboratory facilities. The data for rural and urban areas are presented separately. There are 225 tables and 72 tabular statements.

131 RAY K, NAYAR B K, MITTAL J P: Master's degrees awarded in India in science subjects 1921-65. New Delhi, Council of Scientific and Industrial Research, 1967. 87p. (D.S.T.P. pub No.5)

Presents the number of awards of M.Sc., M.A. and other equivalent degrees from 65 Indian universities, institutions of higher education and other examining institutions during the period 1921-65. Table I gives university-wise annual outturn. Universities are arranged alphabetically and under each university the subject break-up has been given. Table II presents the data subject-wise (33 subjects). Under each subject figures are presented university-wise. Two other tables give: all-India outturn, and five-year grouping of outturn. Appendix contains list of universities and institutions deemed as universities. During the period under review India had produced 98,643 postgraduate scientists, of which 69,649 are in physical, mathematical and geological sciences, 22,206 in agricultural and biological sciences and 6,788 in mental and social sciences. Calcutta University offers the highest number of subjects (28) followed by Nagpur University (22). The 1965 outturn of a few universities are: Agra 2,126; Madras 463; Calcutta 448; Kerala 391; Punjab 376; Bombay 328; Patna 259; Delhi 250; and Nagpur 227.

STUDENT INDISCIPLINE

132 AIYAR S P: Students and politics in India. (*In* his Politics of mass violence in India. Bombay, Manaktalas, 1967. 94-103.)

The following reasons have been attributed to unrest, indiscipline and violence among students: 1) student participation in the freedom struggle in pre-independence days; 2) unplanned educational expansion in spite of limited resources and paucity of competent teachers. The overall effect is the production of graduates with no sense of direction, who not only contribute to the growing unemployment but to the class of 'unemployables"; 3) the influence of Indian films. These films are a clue to the psychological tensions of a transitional social system. Their effect on students needs psychological study; 4) reaction to the restrictions of authority at home, replaced in society by equally authoritarian teachers, vice-chancellors and university authorities; 5) mass failure in examinations which leads to frustration; 6) presence of a large number of professional 'students' on the campus whose sole job is to organize agitations rarely on genuine academic grounds; 7) impact of the present political situation; 8) general tendency on the part of the authorities either to ignore legitimate student desires or to yield only to violence and organised pressures, encourages, indiscipline.

133 BHATTACHARYA S: Study of student unrest as a psychological problem at the college and university level. Journal of Education & Psychology 1967, 25(2), 127-31.

In an attempt to analyze psychologically the problem of student unrest, it has been pointed out that many of the contributing factors are already known and that merely a questionnaire survey would not be useful in finding out remedial measures. Instead, an intensive objective type investigation has been suggested for studying the real interaction between the various forces (organic, social or environmental) and the problem of unrest. A set of hypotheses should be formulated based on close observations by psychologists, educationists and sociologists. Each hypothesis should be subjected to close scrutiny and experimentation by small research units consisting of parents, teachers, heads of institutions and some members of the community.

134 SHAH A B: Student discipline. (In Aiyar S P, Ed. Politics of mass violence in India. Bombay, Manaktalas, 1967. 104-10.)

In higher education discipline has to be voluntary and self-directed and the incentives to positive discipline must emanate from the opportunities provided by the institution and the demands it makes on students. Following are some suggestions which have very little financial implications: 1) the institution should have a detailed and phased academic programme which should be clearly conveyed to students with all its implications. The programme should be vigorously implemented with suitable rewards and punishments; 2) teachers should supervise and guide all student associations which should be governed by three principles - student participation, student autonomy and student responsibility; 3) facilities such as library room, day scholars' home with subsidized food, easy access to teachers and extra-curricular activities should be provided; 4) the government and political parties should mutually agree to adopt more enlightened norms of behaviour in relation to universities.

135 SWAMINATHAN S: Student indiscipline - a vexed question. Journal of the Mysore State Education Federation 1967, 21(2), 38-43.

A critical study of the news items appearing in newspapers shows that parents, the present social set-up, teachers and students themselves are equally responsible for student indiscipline. Indifference of parents to the education of their children, failure of teachers to instil character in students, low public morality, and interference of politicians in student affairs are the causes of student unrest. Other reasons are: frequent changes in educational system, outdated examination system, malpractices in educational administration, and failure of authorities to look into genuine student grievances. A sample of 14 news items relating to student indiscipline has been given.

STUDENT PROBLEMS

136 BIR SINGH: Study of the causes of students' problems. Indian Educational Review 1967, 2(2), 149-50.

A sample of 85 student-teachers (all teachers) of the B.Ed. class of P.G.B.T. College, Chhatarpur (Gwalior, M.P.) was asked to write their experience in the form of an essay on 'The student whose problems I tried to solve'. The sample of students reported on, comprised 87 boys of 87 institutions (6 primary schools, 54 middle schools, 22 higher secondary schools and 5 intermediate colleges). The data were analyzed for: 1) important causes of students' problems and the percentage of cases in which these were noticed; and 2) percentages of cases of problems on the basis of father's occupation. The main findings are: 1) no child has only one specific cause for his problems; 2) more than 50% of the causes lie in the home conditions; 3) nearly 45% of the causes arise from the environment outside the home. School conditions account for 25% and class teachers for 8%; 4) the cumulative influence of the conditions in the neighbourhood are responsible for 8% of the causes; 5) nearly 6% of the problem cases are boys whose fathers are engaged either in business or agriculture.

137 JULKA G L, MEHTA P: School problems of adolescent boys and girls. (an exploratory study). Rajasthan Board Journal of Education 1967, 3(4), 23-8. 3 ref.

A checklist consisting of 100 items covering 10 problem areas was administered to a sample of 100 students (50 boys and 50 girls) of class IX reading in 4 higher secondary and secondary schools of Jodhpur (Rajasthan). The findings are: 1) boys had a larger number of problems; 2) adolescents indicated problems in all the 10 areas viz., examination, homework, teacher-pupil relationship, time-table, school equipment, school subjects, economic and health, discipline, psychological adjustment, and vocational and educational guidance; 3) except in the area of examination boys showed significantly more and serious problems; 4) even in the area of examination the problems of boys though non-significant are more than those of girls; 5) common problems are - homework, difficulty in finding true friends, inadequate time for teaching English in school time-table; 6) frequent and serious problems of boys are - completing science practical, lack of library facilities, difficulty of understanding science, defective examination date sheet, lack of religious and moral instruction; 7) problems of girls are - lack of fans, failure of the memory, bad handwriting, dislike for essay-type examinations, and punctuality in attendance. Some suggestions have been made.

STUDENT SELECTION

138 DEO P, DHALIWAL H S: Predictive validity of the criterion of selection for entrance to engineering colleges in Punjab University. Journal of Education & Psychology 1967, 25(2), 132-5. 5 ref.

The predictive validity of pre-engineering scores for student selection was investigated. Pre-engineering first year and final year engineering marks of students admitted to various courses during 3 consecutive sessions were considered. About 20-25% of the students selected on the basis of pre-engineering examination scores could not pass the final examination in first attempt. Coefficients of correlation between pre-engineering scores on the one hand and first year engineering and final year engineering scores on the other were calculated for each session by product-moment method. The average correlations for the 3 sessions combined together were .34 and .42 respectively which although significant is low. This indicates that there are other variables besides the score in pre-engineering examination which influence the final result. Construction and standardization of tests suitable for Indian setting have been suggested.

139 **FERNANDES** H J: Variables involved in prediction of college success. Education & Psychology Review 1967, 7(3), 150-65. 19 ref.

An attempt is made, on the basis of the results of various investigations conducted in India and other countries, to determine the various factors that should govern the selection of students to college courses. Disagreeing with the Education Commission (1964-66), it has been pointed out that massive evidence exists to show that achievement in high school is the best single predictor of college success. Therefore, school examination marks should be one of the criteria for student selection. In addition, psychological tests including measures of two symbol systems (verbal and quantitative) are also required. Besides the intellective predictors, there are other unaccounted variables like random changes, sickness, financial worries and peer influence. The services of teachers and counsellors are required to deal with random changes. Further, if studies establish that there are constant institutional environmental differences then these could be used in prediction studies. The institutional contingency variables like student-peer group, official demands, faculty requirements would also affect the prediction. However, the performance of the selected students could be improved if they knew the psychological demands of the college environments. Similarly the effects of teaching and counselling could be maximized if a better picture of the student and student-peer groups, faculty demands and requirements is available.

STUDY ABROAD

140 SINGH A K: Impact of foreign study: Indian experience. (In Shah A B, Ed. Education, scientific policy and developing societies. Bombay, Manaktalas, 1967. 224-36.)

The impact of foreign education on the attitudes, academic achievement, and professional outlook of Indian students has been discussed. Various studies on foreign educated students show that foreign study heightened their sense of nationality and intensified their bonds with the motherland. The prosperity, high standard of living, opportunity for work, creativity and efficiency of Western countries and the marked contrast in the situation in India induce a sense of national identification in them. Inspired by examples of Western teachers who conformed to the image of traditional 'gurus' (preceptors), students become more devoted to their research work and to the idea of a career in research. On return to India, finding the entire situation not congenial for any productive work, they get frustrated. Some are compelled to change their profession because of absence of any demand for certain highly specialized scientific skills. Thus, foreign exchange, technical aid in the form of scholarships, stipends, etc. are wasted as the skills acquired by foreign training are allowed to deteriorate through misapplication and demoralization.

TEACHER EDUCATION

141 JOSHI D C: Supervision and guidance - a case study of three student teachers. Teacher Education 1967, 1(4), 18-28.

An assessment has been made of the performance of three student-teachers in practice-teaching on the basis of the following criteria: 1) clarity of objectives; 2) mastery of subject matter; 3) pupils' involvement in the lesson; 4) range of activities provided and their productivity; 5) presentation of the lesson and extent to which interest is created; 6) attitude towards pupils; 7) evaluation technique; 8) relation of the lesson with actual life; 9) class management; 10) clarity, consistency and logical nature of thought; 11) efficiency and adequacy of language; 12) black board work; 13) personality; 14) use of teaching aids; and 15) home work and assignment. The practice-teaching was observed and supervised, and guidance was provided. It has been concluded that: 1) certain criteria for analyzing the students' performance should be prepared for more objective evaluation of practice-teaching, and 2) the total personality of the student-teacher(i.e. the total impact of his teaching on the students) should be assessed.

142 SHAH B G: Teacher education programme on the anvil. Teacher Education 1967, 1(4), 1-9. 5 ref.

Following measures have been suggested for the improvement of teacher education programme: 1) developing the spirit of professionalism - teacher educators should understand that teaching is a profession based on some theory and should be undertaken in a spirit of professionalism; 2) optimum staff utilization - this implies exploiting a teacher educator's talents to the maximum and it may be achieved by allowing a teacher's cumulative growth in one curriculum area to continue. Non-academic work of teacher educators should be reduced to the minimum. Optimum staff utilization could also be achieved by intra-institutional exchange of teachers in an informal setting; 3) inter-institutional contact - links should be established between different colleges of education and also with other educational institutions. Some suggestions in this respect are: a) teaching of educational administration, by educational inspectors or the Director of Education; b) close collaboration between coordinator of Extension Services Departments and the Educational Inspector; c) encouraging inter-college exchange of visits of lecturers; d) collaborating with other university faculties in implementing research and training programmes; 4) consumer-oriented programme - this requires preparation of good classroom teachers. Instead of offering 'expert' advice on the imaginable school problems, teacher educators should help school principals and teachers in a practical way by helping them in carrying out some experimental projects.

TEACHER STATUS

143 WORLD CONFEDERATION OF ORGANIZATIONS OF THE TEACHING PROFESSION: Status of teachers in India. New Delhi, Asia Office of the Confederation, 1967, xviii, 387p.

Presents the results of a survey on the following aspects of status of class-room teachers working in primary and secondary educational institutions (below the university level): 1) academic; 2) economic; 3) professional; 4) social; and 5) status in public life. There are 16 chapters covering the following topics: 1) general background Indian education; 2) size, composition and character of the profession; 3) professional preparation of elementary and secondary teachers; 4) qualifications for entry and recruitment procedures; 5) conditions of service and work; 6) salaries, dearness and other allowances; 7) retirement and welfare benefits; 8) teacher organizations, professional status and general rights; 9) public recognition. Chapter 15 summarizes the findings. Chapter 16 makes the following recommendations: 1) improving the level of qualifications - academic and professional; 2) removing disparities in salaries; 3) establishing national directives setting minimum qualifications for entrance, minimum period of academic and professional training, minimum salary scales and working conditions; 4) setting up a statutory negotiating machinery to consider matters relating to salaries, working conditions, etc. 5) developing a long-term programme for teachers' welfare; 6) vitalizing teacher organizations. There are 115 tables.

144 **DESHPANDE S K**: New techniques of language teaching. Naya Shikshak 1966-67, 9(2-3), 212-16.

Discarding of traditional grammar and translation methods of language teaching in favour of new techniques based on psychological principles has been advocated. The translation method encourages word by word substitution of mother tongue structure by the foreign language structure often resulting in faulty expression. Effective presentation is important in the process of language learning. Best presentation technique involves action chains and oral chorus drills. This should be followed by the use of question-answer techniques. Situational techniques should be used for effective presentation of grammar. Every structure should be presented in a meaningful context possibly in a familiar everyday situation. Textbook stories may also be used. Other techniques and aids suggested are: 1) drilling technique using substitution table; 2) audio-visual aids; and 3) language laboratory.

145 **DHAR K L**: Teaching of English in India. Teaching 1967, 49(4), 118-22.

Suggestions for improvement of the working of 10 State Institutes of English (SIE), the Central Institute of English (CIE) and the Regional Institute of English (RIE) concerned with English teaching are: 1) clear demarcation of the functions of CIE and SIE's; 2) inclusion of short courses, orientation courses, etc. and diploma courses for high or higher secondary school teachers and training college lecturers in CIE programme; 3) preparation by CIE of vocabulary lists suitable for different levels by adapting existing word-lists to Indian requirements, compilation of bilingual dictionaries, etc; 4) follow-up of the recommendations made at the annual conference of the SIE's; 5) communication between NCERT and its SIE's regarding English teaching; 6) setting up a co-ordinating machinery, consisting of a Policy Planning Committee to deliberate on policy matters, a Review Committee to assess the progress made by the SIE's, and a Training Committee of SIE's to advise on teacher training problems. The activities of foreign agencies also need greater co-ordination. Close liaison should be established between those agencies, the SIE's and other similar agencies. Stress should be more on training Indian students to meet Indian problems.

146 GHOSH B, SINHA A K, NAGCHAUDHURY B D: Review of some approaches to physics teaching. School Science 1967, 5(3), 185-96.

The methods of teaching physics developed in various countries during the last 50 years have been discussed. The important projects are: 1) PSSC project founded by the Physical Science Study Committee (U.S.A.) - the children conduct experiments themselves and teachers are involved in the evolution of curriculum. Teachers are provided with guide books which suggest new methods of teaching along with solutions of problems likely to be faced during teaching. The project lacks information on elementary science and the age group for whom it is intended. Suggested experiments are expensive; 2) Nuffield Foundation Project founded by the Science Masters' Association (U.K.) - text books have no place. Examinations and special evaluation programme are indispensable parts and students are provided with question books. The need for textbooks cannot be completely obviated; 3) the Russian project - mainly intended for the age-group 13-18 (classes VI to XI). The textbooks are written in a lucid way and easy and inexpensive experiments are presented as parts of a consistent course. There is no provision for teachers' guide; 4) Wyndham project designed in Australia provides a complete science course for secondary school students. The concerned publication 'Science for high school' is aimed at establishing coordination between all branches of science and is meant for a wide range of age groups. No instructions are included for its use. Suggested experiments are weak. Most of the projects considered evaluation procedures as part of the curriculum and are associated with specially designed examination systems. Though these new systems show some advance in both content and methodology, none of them has devised a perfect solution for examination procedures.

147 KATIYAR S N: Current issues in curriculum. Rajasthan Board Journal of Education 1967, 3(4), 42- 7.

Importance of the individualization of instruction and its philosophical and psychological basis have been discussed. Bush and Allen Plan, Trump Plan and Melbourne High School (Cape Kennedy) Plan for the individualization of instruction have been described. The ideal would be to teach each child individually. But it is a common experience that children are much alike in many respects. Although they learn as individuals, they need not be instructed as individuals. In the mass educational system obtained in India, . individualization should be understood in this context. Following activities have been suggested for individualizing instruction in India: 1) teaching in large groups - the time to be spent may vary according to subjects and individuality of students; 2) individual study - particular sections of the curriculum in almost the entire field of social sciences and humanities may be left to students for individual study; 3) teaching in small groups - the size of a group, teacher-pupil ratio, subjects to be taught and the time to be allocated are the problems to be examined.

148 NARESH CHANDRA: Summer institute in English. National Herald 30 July 1967, p.3, Cols.5-8; p.4, Cols.1-2. 2145 words.

"New Grammar and the New Methods" of learning and teaching English as introduced in the Summer Institutes in English for the colleges and university teachers has been opposed on the following grounds: 1) confusion exists between the New Grammar and the old and also in the body of the New Grammar itself. By the time such confusion is resolved English is likely to lose its importance in all stages of education; 2) examiners conversant with the old grammar would find difficulty in evaluating answer-scripts; 3) since Summer Institutes are not concerned with higher secondary teaching and examinations, students would continue to learn old grammar in schools. Switching over to new grammar at college stage would be a problem. The stress on phonetics has also been criticized.

149 PATHAK O P: Multi-skill approach in the teaching of English. Rajasthan Board Journal of Education 1967, 3(4), 14-17.

The multi-skill approach advocated by the Central Institute of English implies simultaneous learning of the four skills, viz., listening, reading, speaking and writing. The approach is also situational because teaching is mostly related to real life situations. Learning takes place through explanation and instruction. Mother tongue may be used in the former but not in the latter case when the student learns the form of the English language. Following steps have been suggested for a prose lesson in high school English: 1) selection of teaching material - phrases, structures and words on the basis of majority usage, teachability at any given level, and usefulness in Indian context; 2) writing those items and also the illustrative sentences using these items on the board; 3) giving a simplified version of the passage to be presented preferably in a story form; 4) removing cultural difficulties, if any, while presenting the simplified version; 5) reading out the text stressing on the pronunciation of difficult words; 6) writing on the board three or four comprehension questions that require answers in two or three sentences; 7) reading the text silently; 8) answering the questions orally and also writing.

150 THIRUVENKATACHARI K V: Remedial measures in teaching handwriting. Journal of Educational Research & Extension 1967, 4(1), 1-6.

On the basis of the findings of two experiments conducted in Sri Ramakrishna Mission Vidyalaya, each lasting for three years continuously from Standard 6 to Standard 8, following steps have been suggested: 1) exercises on penmanship and mechanical copying of letters, words and sentences (Standard 3); 2) copying of meaningful sentences using unjoined script (Standard 4); 3) graded exercises in cursive writing (Standard 6); 4) introducing the element of speed (Standard 8); 5) evolving a handwriting scale for measuring the quality of handwriting of a pupil; 6) selection of familiar passages only for speed tests; 7) integrating the daily transcription work with other kinds of written work such as copying, composition (Standards 9, 10 and 11). Beacon script has been recommended because of its five advantages - 1) forward movement; 2) good speed; 3) better legibility; 4) elegant style; and 5) pleasing appearance.

TESTS AND MEASUREMENTS

151 CENTRAL INSTITUTE OF ENGLISH, HYDERABAD: Testing language skills for PUC English (question paper II). Naya Shikshak 1966-67, 9(2-3), 276-91.

A model three-hour question paper on English for pre-university course has been devised in accordance with the recommendations of the Seminar of heads of departments and chairmen of Boards of Studies in English, held in 1961 in Srinagar. The paper is divided into 3 sections - Sections I and II to test average pupils, and III to test advanced pupils. Sections I and II consist of vocabulary, comprehension, usage and composition, and Section III covers in addition to these areas, spelling, punctuation and phonetic transcription at an advanced level. Questions are precise and objective, cover wide areas and are not confined to any particular test techniques. Each question tests one specific point. The relative importance of language skills is reflected as follows in the test paper: usage (morphology and syntax) - 36%; composition, precis-writing - 21%; vocabulary - 14%; comprehension - 19%; spelling and punctuation - 7%; phonetic transcription - 2%; reference skills - 1%. The three sections have been assigned 23, 35 and 42 marks respectively. The minimum pass marks are: Sections I & II 40% and Section III - 15% (i.e. 55% on the aggregate). Students successful in Sections I & II should be deemed to have passed the higher secondary examination and students qualifying in all sections should be deemed as having passed the pre-university examination in English.

152 **DEVA R C:** Approach to the measurement of teaching efficiency. Teacher Education 1967, 1(4), 33-8. 8 ref.

An attempt is made to construct a rating scale based on "critical incident techniques" devised by Flanagan (Psychological Bulletin 1954, 51,327-58). The need for such a scale arises because of the inadequacy of existing techniques e.g. measures of pupil-change, rating scales used by pupils and supervisors. Selection of teacher-characteristics and their appropriate definitions are some of the important considerations in constructing a scale. A rating scale based on 'critical incidents technique' i.e. on the observable teacher behaviour or characteristic that distinguishes the most effective teacher from the ineffective ones, would be more suitable. For this purpose, sufficient number of such characteristics were gathered from supervisors and student-teachers who possess experience in observing student-teaching or specific behaviours of teachers in specific teaching situations. These characteristics were scrutinized for the following criteria: 1) relation to actual classroom teaching; 2) applicability to student-teaching situation; 3) amenability to assessment; 4) applicability to all disciplines; 5) observability either in terms of teacher action or student response. They were then grouped into several mutually exclusive categories and each category was given a suitable name. It is believed that a rating scale based on such characteristics would be a more valid measure of teaching efficiency.

153 **JANGIRA K N:** Experimental study of the effect of some selected incentives on the performance of IX grade boys on an achievement test in Mathematics. Indian Education 1967, 6(7-8), 20-31.

A sample of 80 boys from 3 Delhi schools was put in 4 groups - one control group and 3 experimental groups. The tools used were: 1) two equally effective tests, pre-test (A) and post-test (B) in mathematics, and 2) two achievement motivation tests each containing 6 selected TAT type pictures. All the 4 groups were given test A followed by achievement motivation test. Before administering test B, each group was advised as under: 1) control group - the test was part of a research investigation; 2) experimental group I - those who improve this score by 8 would be given prizes; 3) experimental group II - the results of the test would be considered in the annual examination; 4) experimental group III - the test was meant to be a competition between Delhi schools, and the school scoring the highest average would be awarded a trophy. Administering of test B was again followed by the second achievement motivation test. Following are the conclusions: 1) the incentives used in this study were equally effective and contributed towards the improvement of the performance on both mathematics achievement test and achievement motivation test; 2) experimental group performed better than the control group; 3) boys who scored high on mathematics achievement test also scored high on achievement motivation test.

154 KAMAT V V: Measuring intelligence of Indian children. 4th ed. Bombay, Oxford University Press, 1967. xvi, 322p. 80 ref.

The first chapter traces the history of mental testing. The next two chapters discuss the theory, practice and uses of intelligence tests. Objective evaluation is described in Chapter 4 with examples. Chapter V gives the Stanford version of the Binet-Simon scale. A revision of Binet's scale (Stanford version) was undertaken by the author in 1934 to suit Indian conditions. Altogether 1,074 children and adolescents (age group 2-20) of both sexes belonging to Dharwar (Mysore State) were subjected to the test. The results of the experiment are presented in Chapter 6. The concept of IQ in the context of this experiment has been discussed in Chapter 7. Chapter 8 presents the results of the reappraisal of the 1934 experiment done in 1964 with a sample of 330 children from Bombay city. Thirteen tests for years 3-22 are given in Chapters 10-12 and Chapter 9 contains general directions for giving the tests. Appendices A and B present case studies involved in the 1934 and 1964 tests.

155 SHAH M R: Construction and standardization of achievement tests in Gujarati for standards V, VI and VII. Indian Educational Review 1967, 2(2), 144-6.

The following types of tests (total number 18) for each of the 3 standards in 6 school subjects (Gujarati, Hindi, Arithmetic, History, Geography, and Science) were constructed: 1) recall type - simple recall and completion tests; 2) recognition type - multiple-choice, matching, and true-false; 3) figure tests. Over 3000 items were subjected to a pre-pilot and pilot testing for making final selection. Pilot testing was done by administering them to a sample of 370 pupils of each standard, selected at random from 15 schools in the city and suburbs of Bombay. Final items were selected after careful consideration of the following: 1) difficulty value; 2) item validity; 3) discriminating power; 4) distractors of multiple choice items; 5) curricular validity. Items with validity (r) less than 0.25 and discriminating value less than 13 were discarded. For obtaining the norms, final tests were administered to pupils from 35 schools. Percentile norms and standard scores or z-scores were worked out. The mean, median, quartile deviation and standard deviation were calculated. Reliability was computed by means of split-half method and rational equivalence method. The reliability co-efficient ranged from .81 to .99. The curricular validity and statistical validity were found out. In almost all the tests the value of co-efficient of correlation was above 0.50. Test manuals were prepared.

6 **INSTITUTE OF APPLIED MANPOWER RESEARCH, NEW DELHI:** Educational and training preparation of technicians. New Delhi, the Institute, 1967. iv, 73p. (IAMR Working Paper No.2/1967).

A study (Chapter II) of the place of middle level technicians in industry indicates that there exists a major difficulty in obtaining and comparing their employment patterns because of the variations in definitions and utilization patterns. Chapter III discusses the three patterns of educational preparation of the technician in India, viz. the three-year diploma course, the two-year technicians' course and the sandwich course. The three-year course is most extensive and is offered in 259 polytechnics. Following recommendations (Chapter I) have been made: 1) narrowing the major branches of engineering or technology into technician specialities for the pre-employment preparation of technicians; 2) consultation with industry to determine the demand for each speciality, since an overall normative approach to the development of training facilities would be undesirable and impracticable; 3) improvement of the standards of educational preparation of technicians by (a) raising the minimum qualification for admission to a pass in the Higher Secondary Examination, (b) standardizing the length of course (3 years plus 1 year terminal training), (c) improving the syllabus, and (d) the calibre of teaching staff and facilities in polytechnics; 4) making the course largely industry-based; 5) raising the status of the technician courses; 6) setting up of small working groups in the major branches of engineering and technology to determine the manner of grouping of the technical specialities.

57 **MATHUR J C:** Farmer's training - an outline. Indian Journal of Adult Education 1967, 28(8), 6-8, 15.

Adoption of an integrated programme by all the agencies involved has been advocated. The broad policies of such a programme are: 1) the immediate objective should be quick and improved agricultural production; 2) the training should result in the acquisition of skills for the adoption of new practices and the use of inputs; 3) there should be two-way communication between the participating farmers and the experts; 4) there should be small local and informal groups functioning as continuing institutions: The programme visualises: 1) demonstration cum training camps; 2) farmers' discussion cum demonstration groups; 3) farmers' Institutes or Kisan Vidyapeeths; 4) functional literacy sub-groups; 5) intensive broadcasting units at selected radio stations; and 6) provision of sufficient number of radio sets to the farmers' discussion groups.

158 **PARDESHI J S**: Young farmers and their farm education. Indian Journal of Adult Education 1967, 28(7), 10-12.

There is no systematic programme for providing education to the out-of-school farmers. The present study was designed: 1) to determine some personal characteristics of young working farmers; 2) to identify their needs; and 3) to determine the attitude of farmers to selected aspects of agricultural education programmes. The sampleconsisted of 206 young farmers (representing 3.9% of total young farmers) from 23 villages of U.P. and Punjab. The villages selected were from 4 Community Development Blocks - two in the Intensive Agricultural District Programme areas and two outside such areas. The study revealed the following attitudes of young farmers: 1) realization that the present level of production is not sufficient; 2) confidence in possibility of increasing production; 3) desire and willingness to experiment and to try out new practices; 4) confidence in village level workers, extension agents, adult educators, school-teachers, etc., who can guide them in bringing about desirable change. Other findings are: 1) education plays an important role in increasing agricultural productivity; 2) almost all the farmers were interested in learning new techniques of farm production, farm management and farm mechanics; 3) they attached great importance to self-education and an education programme through village level workers. It has been suggested that a complete agricultural educational programme should consist of short courses which may lead towards the understanding of all the processes involved in progressive farming.

159 **ROKADIYA B C**: Concept and problems in workers' education. Indian Journal of Adult Education 1967, 28(8), 10-14.

A comparative review of the workers' education programme in U.K., Scandinavian countries, Yugoslavia China and India has been made. The factors impinging upon the development of workers' education in India are: 1) low level of literacy; 2) predominantly rural population; 3) migratory character of industrial labour; and 4) a constant drift from rural to urban areas. A notable feature of Indian workers' education programme is that it has been a part of the trade union movement of urban industrial workers or of the adult education movement involving rural workers. There seems to be apparent unanimity as to the need of sharing the programme among several agencies involved in the matter viz. trade unions, universities, adult education organizations and the State governments, although opinions on the nature of partnership are divided. Since workers' education is a continuous process, it has been suggested that it should be in the realm of continuing education as against the terminal concept of training or education. Therefore, it should have an appropriate place in the programmes of adult education agencies.

160 JOHN V V: Waste in education. The Hindustan Times 31 July 1967, p.7, Col. 7-8, 1974 words.

Defective curriculum, unreliable examination system, and low standards of teaching and learning are the main reasons for large scale failures in examinations. The opinion that the educational system cannot be made more effective with the transformation of social order is not tenable since education itself is a motive force for effecting change. The defects of external examinations may be reduced by each institution setting up standards higher than those required for passing external examinations. However, failure in examinations is only a minor aspect of educational wastage. The really serious wastage is reflected in the employment pattern of those who pass in examinations: 1) the proficiencies and skills acquired by them are of no value and 2) the proficiencies are misused or not used at all. As recommended by the Education Commission, the system of one-year internship in professional education should be extended to all categories of graduates, so that a proper return for the investment in education is ensured. Professional training should be related to professional needs and opportunities.

161 LEONARD J P: Wastage in education India. Indian Education 1967, 6(9), 3-9.

Presents the important findings of a study conducted by R.C. Sharma and C.L. Sapra of the Department of Educational Administration (NCERT): 1) rate of wastage and stagnation at the primary stage (65.3%) had remained relatively constant during 1950-1960; 2) the highest rate is in grade I and the rate decreases through grade 8; 3) the rate is higher among girls than boys; 4) rate of drop-out varies among States; 5) the main causes of drop-outs in primary stage, according to parents and teachers are: (a) involvement of pupils in domestic work, (b) low socio-economic status, (c) pupil's poor health and disability, learning difficulties, retarded emotional maturity, and inadequate learning motivation, (d) lack of school and community relationship, (e) indifference of parents, and (f) defective school organization and administration and curriculum; 6) in the middle school the 5 most important causes of drop-outs, according to parents and teachers, are: (a) involvement in domestic work, (b) low socio-economic status, (c) economic needs of family, (d) learning difficulties, and (e) inadequate motivation.

162 SAPRA C L: Educational wastage and stagnation in India. New Delhi, National Council of Educational Research and Training, 1967. 58p. 15 ref.

Quantitative and statistical aspects of wastage and stagnation have been discussed in Chapter II. Chapter III reviews the studies and researches conducted in India with particular emphasis on the concepts evolved and the techniques used in assessing the extent and identifying the causes of the problem. Chapter IV describes the experiments conducted by the State Institutes of Education, Udaipur and Ahmedabad and the Educational Research Unit of the Municipal Corporation of Bombay to reduce the extent of wastage and stagnation at the first level of education. These experiments aim at minimizing the incidence of stagnation and retaining the 'potential' drop-outs in school till they pass the last grade. Since the problems faced by almost all developing countries in Asia are more or less similar, a common research design to study the problem at the first level of education and also a common programme of action to improve the existing situation have been proposed.

List of Periodicals Abstracted

Alumnus: V 2, No 1
Bombay Hospital Journal: V 9, No 2
Cenbosec News & Views: V 3, No 2
Eastern Pharmacist: V 10, No 116
Education & Psychology Review: V 7, Nos 2,3
Education Quarterly: V 19, No 1
Home and School: V 8, No 2
ICBE Bulletin: 1967, June
Indian and Eastern Engineer: 1967, Anniversary Number
Indian Education: V 6, Nos 7-9
Indian Educational Review: V 2, No 2
Indian Engineer: V 11, No 4
Indian Journal of Adult Education: V 28, Nos 7,8,9
Indian Journal of Applied Psychology: V 4, No 2
Indian Journal of Experimental Psychology: V 1, No 2
Indian Journal of Medical Education: V 6, No 3
Journal of the College of Education, Karnatak University V 5, No 1
Journal of Education and Psychology: V 25, No 2
Journal of Educational Research & Extension: V 4, No 1
Journal of Gujarat Research Society: V 29, No 3
Journal of the Mysore State Education Federation: V 21, No 2
Journal of Vocational and Educational Guidance: V 13, Nos 2-3
Maharashtra Medical Journal: V 14, No 4
Manpower Journal: V 3 No 1
Modern Review: V 122, No 1
NIE Journal: V 1, No 6
Naya Shikshak: V 9 Nos 2-3

New Concepts: V 1, No 4
Progress of Education: V 42, No 1
Punjab Medical Journal: V 16, No 11
Quest in Education: V 4, No 2
Rajasthan Board Journal of Education: V 3, No 4
Regional College Record, Bhubaneswar: V 4, No 5
School Science: V 5, No 3
Science and Culture: V 33, No 6
Silk and Rayon Industries of India: V 10, No 6
Social Studies Teacher: V 4 No 2
Teacher Education: V 1, No 4
Teaching: V 49, No 4
V O C Journal of Education: V 7, Nos 1,2
Vigyan Shikshak: V 11, No 1

Newspapers:

Amrita Bazar Patrika: 1 Aug
Hindu: 31 May, 24 Aug
Hindusthan Standard: 3 Sept
Hindustan Times: 31 July, 24 Aug
Hitavada: 1 July
National Herald: 3 July

SPECIAL SECTION

INDIAN LANGUAGE PROBLEM AND EDUCATION

I. Official Documents (1948-1967)

Entries are arranged chronologically:

A1 INDIA. UNIVERSITY EDUCATION COMMISSION (1948-49): [Place of language in] courses of study - arts and science. (In its Report, Vol 1. Delhi, Manager of publications, 1962. 126-31).

Ninth and tenth grades: 1) mother tongue (correct and effective use of language, acquaintance and appreciation of select literature); 2) federal language (comprehension and use in simple everyday situations); or a classical or modern Indian language (for those whose mother tongue is the federal language); 3) English (comprehension and simple composition); Besides, a classical language and a modern language have been included in the list of elective subjects. Eleventh and twelfth grades - as above. In the list of elective subjects are also included a classical language, a modern Indian language and a modern European language. First degree course (Arts and Science): 1) the federal language or if that happens to be the mother tongue, a classical or a modern Indian language; 2) English. Only in the humanities group in the list of elective subjects there is provision for a classical or modern Indian language and English, French or German. The course in the federal language or the alternative and English may end either at the first, second or third year, as the case may be, according to the degree of proficiency of the candidate. Candidates for the first degree course would have had 6 years of tuition in the federal language or its alternative and four years of tuition in English in secondary schools.

A2 INDIA. UNIVERSITY EDUCATION COMMISSION (1948-49): Medium of instruction. (In its Report. Vol 1. Delhi, Manager of publications, 1962. 304-26).

The problems of developing the federal language and the medium of instruction have been discussed and the following recommendations have been made: 1) development of the federal language through the assimilation of words from various sources and the retention of words which have already entered into Indian languages; 2) adoption of international technical and scientific terminology, assimilation of borrowed words, adaptation of their pronunciation to the phonetic system of Indian language and fixation of their spelling in accordance with sound symbols of Indian scripts; 3) replacement of English as medium of instruction for higher education as early as practicable by an Indian language which cannot be Sanskrit on account of vital difficulties; 4) pupils at higher secondary and university stages should be conversant with three languages - regional language, federal language and English; 5) higher education should be imparted through the regional language, with option to use federal language either for some or for all subjects; 6) adoption of Devanagari as script for the federal language; 7) taking immediate steps for developing the federal and regional languages; 8) study of English in high schools and universities.

A3 INDIA. PROVINCIAL EDUCATION MINISTERS' CONFERENCE (1949): [Education for the linguistic minorities]. (In India. Commissioner for Linguistic Minorities. Fifth report. New Delhi, Ministry of Home Affairs, 1963. 125).

Resolution adopted at the meeting: the medium of instruction in the junior Basic stage must be the mother tongue of the child. If it differs from the regional or State language, arrangements should be made for instruction in the mother tongue by appointing at least one teacher to teach all the classes, provided there are at least 40 pupils speaking the language in a school or 10 such pupils in a class. The regional or State language where it is different from the mother tongue should not be introduced earlier than class III or later than the end of the junior Basic stage. To facilitate switching over to the regional language as medium of instruction at the secondary stage, children should be given the option to answer questions in their mother tongue for the first two years after junior Basic stage. If the number of pupils speaking a language other than the regional or State language is sufficient to justify a separate school in an area, such a school may use the language as the medium of instruction. Such arrangements would, in particular, be necessary in metropolitan cities or places having large populations speaking different languages, or areas with a floating population of different linguistic groups. This recommendation was approved by the Central Advisory Board of Education in its 16th meeting held in 1949 (item no. 18A) and was re-affirmed in its meeting held in 1962 (item no. 3).

A4 INDIA. CONSTITUTION: Official language. (In India. Constitution. Delhi, Manager of publications, 1967. 130-3).

Art. 343 lays down that the official language of the Union shall be Hindi in Devanagari script and international form of Indian numerals shall be used. English shall continue for a period of 15 years from the commencement of the Constitution (26 January 1950). It also provides for: 1) the use of Hindi in addition to English and of the Devanagari numerals in addition to international form of numerals during this period and 2) the continuation of English or the Devanagari numerals beyond January 1965. In Art. 344 there is provision for: 1) a Commission to make recommendations on the progressive use of Hindi and imposition of restrictions on the use of English, and 2) a Committee of Parliament to examine these recommendations for the consideration of President. Art. 345 empowers the Legislature of a State to adopt one or more of the languages in use in the State or Hindi for official purposes. Otherwise, the English language shall continue. Art 347 provides that the State shall recognize a language for official purposes if a substantial proportion of the population desires its use. Art. 346 provides that the language in use in the Union for official purposes shall be used for communication between one State and another and between a State and the Union. By agreement Hindi may be used for communication between States. Art. 348 prescribes that all proceedings in the Supreme Court or High Courts and the authoritative texts of all legislations shall be in the English languages. However the official language of the State or Hindi may be used in proceedings in the High Court except for judgements, decrees and orders. According to Art. 350A every State and local authority shall provide adequate facilities for instruction in the mother tongue at the primary stage of education to children belonging to linguistic minority groups. There shall be a Special Officer to look after the interests of the linguistic minorities. Art. 351 makes it the duty of the Union to promote the spread of the Hindi language, and to develop it as a medium of expression for all the elements of the composite culture of India.

A5 INDIA. SECONDARY EDUCATION COMMISSION (1952-53): Study of languages. (In its report. New Delhi, Manager of publications, 1965. 49-60).

Considering the importance of English in higher education and also in the diversified courses at higher secondary level, study of English should be given due position in secondary schools and facilities should be made available at the middle school stage for its study on optional basis. In the case of those students passing out of senior Basic schools or from middle schools who have not taken English as a subject of study, provision has been made in the curriculum for an elementary course in English. Special arrangements should be made in Secondary schools for advanced course in English for those who wish to take up higher education. As regards the study of Hindi, pupils at the secondary stage should be given an opportunity of acquiring a basic knowledge of the language and it may be left to him to develop it according to his needs. As regards the classical languages, provision should be made for their study either at the high school or higher secondary school stage, and accordingly the following recommendations have been made: 1) mother tongue or regional language should generally be the medium of instruction throughout the secondary school stage, subject to the provision that for linguistic minorities special facilities should be made available on the lines suggested by the Central Advisory Board of Education; 2) during the middle school stage, every child should be taught at least two languages. English and Hindi should be introduced at the end of the junior Basic stage, subject to the principle that no two languages should be introduced in the same year; 3) at the high and higher Secondary stage, at least two languages should be studied, one being the mother tongue or regional language.

A6 INDIA. STATES REORGANIZATION COMMISSION (1953-54): Language and culture; Safeguards for linguistic groups. (In its Reports. New Delhi, Ministry of Home Affairs, 1955. 35-48, 205-16, 260-1).

The position of language in the reorganization of States has been discussed in Chapter 3 of Part 2 and the following principle was adopted in this matter: 1) recognition of linguistic homogeneity as an important factor conducive to administrative convenience and efficiency. But this factor should not over-ride all other considerations, administrative, financial or political; 2) meeting adequately the communication educational and cultural needs of different language groups, whether resident in predominantly unilingual or composite administrative units; 3) rejection of the theory of 'one language one State' which is neither justified on grounds of linguistic homogeneity nor practicable. In Chapter 1 of Part 4, the safeguards for various linguistic groups have been discussed: 1) constitutional recognition of the right of linguistic minorities to have instruction in their mother tongue at the primary school stage subject to availability of a sufficient number of students (since incorporated in Article 350A of the Constitution. see abstract no. A4); 2) adoption of a code governing the use of different languages at different levels of State administrations; 3) use of the main language of the State or English or Hindi or the language of a minority constituting about 15% - 20% or more of the population of the State, in examinations regulating entry into State public services.

A7 INDIA. CENTRAL ADVISORY BOARD OF EDUCATION: Suggestions of two formulae for study of languages. (In India. Ministry of Education. Reconstruction of secondary education. New Delhi, Manager of publications, 1967. 35-6).

The Board in its 23rd meeting held in 1956 accepted the recommendations (item no. 2) of the All India Council for Secondary Education that provision should be made for the compulsory study of three languages at the secondary stage of education and resolved to elicit the opinion of the State governments on the advisability of adopting either of the following two formulae: 1 (a) One language from the following: (i) mother tongue; (ii) regional language; (iii) a composite course of mother tongue and a regional language; (iv) a composite course of mother tongue and a classical language; (v) a composite course of regional language and classical language; (b) Hindi or English; (c) a modern Indian language or a modern European language provided it has not already been taken under (a) and (b); 2 (a) as in 1(a); (b) English or a modern European language; (c) Hindi (for non-Hindi speaking areas) or another modern Indian language (for Hindi speaking areas).

A8 INDIA. MINISTRY OF HOME AFFAIRS: Safeguards for linguistic minorities [Memorandum dated 19 September 1956]. (In India. Commissioner for Linguistic Minorities. Fifth Report. New Delhi, the Ministry, 1963. 126-9).

Following proposals have been made concerning the recommendations of the States Reorganization Commission (see abstract no. A6) in respect of education of the linguistic minorities: 1) the resolution adopted by the Provincial Education Ministers' Conference, 1949 (see abstract no. A3) should be the guideline in implementing the proposed constitutional provision for instruction in the mother tongue (since incorporated in Article 350A of the Constitution;(see abstract no. A4); 2) although the States Reorganization Commission had not recommended constitutional recognition of the right to receive instruction in the mother tongue at the secondary school stage, schools for the pupils belonging to linguistic minority groups, as suggested by the Provincial Education Ministers' Conferences (see abstract no. A6), should be encouraged; 3) since the Central Advisory Board of Education, the Secondary Education Commission and All India Council of Secondary Education have assigned the mother tongue an important position in the curriculum, the mother tongue of the linguistic minorities should be included in the three-language formula; 4) while every effort should be made to affiliate educational institutions in respect of courses of studies in the mother tongue to Boards of Education or Universities within the State, such institutions may also seek affiliation to appropriate bodies located outside the State.

A9 INDIA. OFFICIAL LANGUAGE COMMISSION (1956): Union language and the educational system. (In its Report. New Delhi, Ministry of Home Affairs, 1957. 71-104, 403-6).

The problems of language study and of medium of instruction have been considered only in so far as they are related to the language question of the country. Study of Hindi should commence roughly at the close of the primary stage and should be compulsory at the secondary stage throughout the country. Students in scientific and technical courses should possess adequate knowledge of English. Study of English should commence in secondary schools, about 5 years before School-leaving Examination. Replacement of English should be properly phased to prevent lowering of standards. At the university stage, one common medium should be preferred. But considering all factors it would be advisable at present to use English, Hindi, and the regional language according to convenience at different stages and for different subjects. However, universities should be free to take final decision after mutual consultation. But Hindi should be allowed as the medium of examination in all universities and universities should be under obligation to affiliate institutions using Hindi as the medium. In the case of scientific and technical institutions where students are selected from different linguistic regions the common medium should be Hindi otherwise the medium should be the regional language.

A10 INDIA. OFFICIAL LANGUAGE COMMISSION (1956): Union language and public service examinations. (In its Report. New Delhi, Ministry of Home Affairs, 1957. 71-104, 417-20.)

The linguistic media of the competitive examinations should be generally in keeping with the media of instruction in the educational system. Following suggestions have been made regarding languages as subjects of examination: 1) a compulsory paper in Hindi - one for Hindi-speaking candidates and the other for non-Hindi-speaking candidates; 2) for Hindi-speaking candidates a paper in subjects of cultural interest bearing on different Indian languages; 3) English. As a measure of general encouragement of linguistic studies, liberal provision may be made for subjects of language and literature in the regional languages. Suggestions regarding the use of regional languages as media of examinations are: The alternative of the Hindi medium may be considered in due course when universities completely switch over to the regional language media. The problems, however, are: i) difficulty in moderation; and 2) non-availability of suitable examiners. The alternative of introducing quota system for different linguistic groups has not been favoured. English should continue as an alternative medium as long as necessary. It is, however, likely that in due course, university graduates throughout the country will acquire sufficient command over Hindi so as to dispense with the regional languages.

A11 INDIA. CENTRAL ADVISORY BOARD OF EDUCATION: Compulsory study of three languages as an all-India policy. (*In* India. Ministry of Education. Reconstruction of secondary education. New Delhi, Manager of publications, 1967. 37-8, 34).

Recommendation of the 24th meeting of the Board held in 1957 (item no. 9): A review of the opinion about the two formulae (see abstract no. A7) for teaching of languages in secondary schools by State governments, and of the recommendations made by the Conference of Education Ministers in September 1956 reveals that there was a substantial measure of agreement on the principle underlying both the formulae, viz., the provision for compulsory study of three languages at the secondary stage. The preponderant opinion among State governments, was however in favour of the second formula as proposed or subject to certain modifications to suit local conditions. The Government of India should be approached to accept the three-language formula as the basis of an all-India policy and the State governments should take necessary decisions at an early date, to give effect to this all-India policy with due regard to local conditions. The Board re-affirmed the recommendation in its meeting held in 1962 (item no. 3) and requested all State governments to implement it. The Ministry of Education was requested to review the position periodically and send reports to the Board.

A12 INDIA. STATE EDUCATION MINISTERS' CONFERENCE (1957): Study of English as a compulsory subject. (*In* India. Ministry of Education. Reconstruction of secondary education. New Delhi, Manager of publications, 1967. 36-7).

Considering the importance of modern European languages for higher education in science and technology, following decisions were taken (item no. 1): 1) English should be taught as compulsory language at secondary and university stages. State governments should take steps to ensure that, at the end of the secondary stage, students acquire adequate knowledge of English to enable them to receive education through English at the university level; 2) English should not be introduced earlier than class IV. The precise point at which English is to be started at the middle stage should be decided by each State; 3) The following three-language formula should be followed for studying languages in secondary schools: (a) Any one of the following: i) mother tongue, ii) regional language, iii) a composite course of mother tongue and a regional language, iv) a composite course of mother tongue and classical language; (b) English; (c) Hindi (for non-Hindi speaking areas) or another modern Indian language (for Hindi speaking areas).

A13 INDIA. COMMISSIONER FOR LINGUISTIC MINORITY: Report. New Delhi, Ministry of Home Affairs, 1958- .(Annual).

The office of the Commissioner was created under Article 350B(1) of the Constitution to investigate and report to the President all matters relating to the constitutional safeguards provided for linguistic minorities (Art.350B(2)). The first report covers the period 30th July 1957 to 31st July 1958. Chapter II of the latest report (for the year 1964, published in 1965) gives a detailed account of the educational safeguards relating to: 1) primary and secondary education; 2) provision of teachers; 3) provision of text-books. The appendices include statements on the progress of implementation of agreed schemes of safeguards in States and statistical data on districtwise educational facilities for linguistic minorities. A plea has been made for reducing the burden of linguistic minorities whose mother-tongue is not Hindi, as they have to learn four languages instead of three as provided in the three-language formula.

A14 INDIA. COMMITTEE OF PARLIAMENT ON OFFICIAL LANGUAGE (1958): /Medium of instruction and public service examinations/. (In its report. New Delhi, Ministry of Home Affairs, 1959. 18-22, 48-53).

The Committee was set up in accordance with Article 344 of the Constitution to examine the recommendations of the Official Language Commission. Following are the observations and recommendations: 1) although English cannot continue to be the medium of instruction in schools and colleges or as the official language for long, it should remain as an important subject of study specially for those engaged in advanced scientific work; 2) the transition from English to Hindi should be gradual and adequate measures should be taken to implement the change. Complete change-over to Hindi is not feasible by 1965. After 1965 Hindi should be the principal official language and English the subsidiary official language; 3) in various training establishments of the Union government, English should continue as the medium of instruction for some time. Medium of examinations for entrance to these institutions should be English or Hindi; 4) the linguistic media of the union public service examinations should be generally in keeping with the media of instruction in the educational system; 5) English should continue to be the medium and Hindi should be admitted as an alternative medium after some time. Both should be available as alternate media for as long as necessary; 6) two compulsory language papers should be introduced in such examinations - one in Hindi and the other in a modern Indian language other than Hindi. One compulsory paper in English should also continue till English is completely replaced by Hindi for all official purpose; 7) an expert committee should be set up to examine the feasibility of introducing regional languages as media of public service examinations without brining in a quota system.

A15 INDIA. CENTRAL ADVISORY BOARD OF EDUCATION: Study of Sanskrit as a compulsory subject. (In India. Ministry of Education. Reconstruction of secondary education. New Delhi, Manager of publications, 1967. 38).

On a careful consideration of the recommendations of the Sanskrit Commission which envisaged the modification of the three-language formula with a view to including Sanskrit as a compulsory subject of study in the secondary curriculum, the Board in its 26th meeting held in 1959 made the following recommendations (item no. 9): While the importance of the study of Sanskrit both from the cultural and linguistic points of view and the need for encouraging it in all possible ways were appreciated, it would not be desirable to include a fourth language as a compulsory subject. This would make the curriculum much too heavy or result in substituting Sanskrit in place of Hindi, which is the official language of the Union. The three-language formula as approved by the Board should not be disturbed as it provides for the study of Sanskrit either on an optional basis as a separate subject or as part of the composite course.

A16 INDIA. PRIME MINISTER, 1947-63 (Jawaharlal Nehru): English and the Indian languages - Speech in Lok Sabha during debate on Mr Frank Anthony's resolution for including English in the Eighth Schedule of the Constitution, August 7, 1959. (In Jawaharlal Nehru's speeches, September 1957 - April 1963. Vol 4. Delhi, Publications Division, Ministry of Information and Broadcasting, 1964. 50-6).

The inclusion of the English language in the Eighth Schedule was opposed on the following grounds: Eighth Schedule is not an exhaustive schedule on Indian languages but a list of the more widespread Indian languages which are spoken by large number of people. But Art. 347 of the Constitution provides for the use of any other languages for official purposes in a particular area. In view of the widespread use of regional languages as media of instruction, English had been relegated to the position of a compulsory second language. It should, therefore, be studied only as a foreign language. The Prime Minister assured that: 1) while implementing the provisions of the Constitution regarding the progressive development of Hindi, it would not be imposed on any linguistic group; and 2) English would continue to be an associate language for an indefinite period.

A17 INDIA. PRIME MINISTER, 1947-63. (Jawaharlal Nehru): Our new needs (Speech in Lok Sabha on the report of the Committee of Parliament on Official Languages, 4 September 1959). (In Jawaharlal Nehru's speeches, - September 1957 - April 1963. Vol 4. Delhi, Publications Division, 1964, 57-62).

Following are the observations: 1) since the regional language is the medium of instruction in schools, English inevitably becomes a secondary language; 2) adoption of Hindi as the official language may create a disability of the non-Hindi-speaking areas. A rule must be made to overcome this; 3) knowledge of Hindi may not be a pre-requisite for recuitment but after recruitment everybody must learn the language. Persons in all-India services similarly should acquire a working knowledge of the language of the State where they are posted; 4) the fear of imposition of Hindi should be removed; 5) English should continue to be an associate language and is to be taught both as compulsory and secondary language to a large number of persons; 6) every Indian language should have identical scientific and technical terms.

A18 INDIA. UNIVERSITY GRANTS COMMISSION: Medium of Instruction - Report of the Working Group to consider all aspects of the question pertaining to the change of the medium of instruction from English to an Indian language. New Delhi, the Commission, 1961. 133p.

Some of the important recommendations of the Working Group (set up in 1959) are: 1) only universities should take the decision regarding the medium of instruction, University cannot share this responsibility with anybody else; 2) a change in the medium of instruction should not be effected until a reasonable number of standard books in Indian languages are available; 3) when such books are available, teachers should be trained in the use of the new medium; 4) in the field of science and technology, the terms of international use should be accepted with the minimum change; 5) as a necessary condition of changeover, the central universities, and regional institutions and colleges should conduct parallel English medium classes; 6) no change should be effected at present in postgraduate and professional courses. Even in the undergraduate science courses it is desirable not to change the medium; 7) colleges should be free to choose English as the sole medium of instruction or as one of the alternative media; 8) the standard of English should be improved, particularly if the medium of instruction is changed to one of the Indian languages; 9) each university or a group of universities using the same medium should have a journal in the new medium for each subject; 10) for All-India competitive examinations, either English alone should be the medium or all the languages of India and English should be used.

A19 INDIA. CENTRAL ADVISORY BOARD OF EDUCATION: English a compulsory examination subject. (In India. Ministry of Education. Reconstruction of secondary education. New Delhi, Manager of publications, 1967. 39).

The desirability of two types of public examination at the higher secondary stage, one with compulsory English and the other without English, was considered by the Board in its 27th meeting held in 1960 (item 5). The argument in favour of the proposal was that the largest number of failures was in this subject and that a large number of students who did not pursue university education had no use for English. The argument for retaining English as a compulsory subject was that it still occupied an important place in administration and in the educational and cultural life of the country. Students were generally unable to decide early whether they would proceed to higher education and whether they had the capacity to pass the examination in English. Experience had shown that even when English was made optional, the demand for the subject continued to be universal. Taking all the pros and cons into consideration, the Board decided in favour of maintaining the status quo.

A20 INDIA. CONFERENCE OF STATE CHIEF MINISTERS AND CENTRAL MINISTERS (1961): /Statement on the language policy/. (In India. Commissioner for Linguistic Minorities. 5th report. New Delhi, Ministry of Home Affairs, 1963. 140-3).

The conference held on 10, 11 and 12 August, 1961 to consider the question of national integration made the following recommendations: 1) the right of linguistic minorities to have instruction in their mother tongue at the primary stage of education was re-affirmed; 2) the mother tongue formula could not be fully applied for use as the medium of instruction in the secondary stage of education; 3) Hindi should be developed quickly as the all-India language for inter-state communication; 4) considering the importance of English in the international field specially in science and technology the study of English is important; 5) the three-language formula evolved by the Government of India, in consultation with the State Governments, for adoption at the secondary stage of education for teaching languages should be modified as follows: a) the regional language and mother tongue when the latter is different from the regional language; b) Hindi or, in Hindi speaking areas, another Indian language; and c) English or any other modern European language; 6) if necessary schools and colleges using minority languages may be affiliated to Universities or Boards outside the State; 7) the tendency of using regional languages as media for University education, though desirable in many ways, may lead to the isolation of such Universities from the rest of India unless there is link in the shape of an all-India language. Since Hindi could be effectively used for this purpose, every attempt should be made to improve it.

Till such time as this happens, English may be continued. Scientific and technical subjects may be taught for as long as necessary in English while other subjects may be taught in Hindi or the regional language.

A21 INDIA. NATIONAL INTEGRATION CONFERENCE: Extracts from the statement issued by the Conference held in September-October, 1961. (In India. Committee on Emotional Integration. Report. New Delhi, Ministry of Education, 1962. 223-4).

Following are the recommendations regarding the medium of instruction and study of languages: 1) considering the importance of English from the point of view of international communication and the growth of modern knowledge generally, and more specially in science, industry and technology, study of English would be necessary at all stages of higher education; 2) in implementing the three-language formula (see abstract no. A11) in the Hindi-speaking areas another modern Indian language preferably of the South Indian group should be taught; 3) study of Hindi and English should commence at an early stage. As regards the medium of university education, while a plea was made for the use of Hindi as the all-India medium, the general view was that the regional languages would ultimately replace English as the medium when the change-over was acceptable to the academic world. But it was agreed that in such an arrangement, there would be the necessity of an all-India link language which must ultimately be Hindi. Since Hindi is still not fully developed English would continue to be the link-language. This implies: 1) Hindi must continue to be taught as a second language at secondary stage, where necessary; 2) English apart from continuing as a transitional link, will remain as a language of international importance for the enrichment of Indian languages in regard to science and technology.

A22 INDIA COMMITTEE ON EMOTIONAL INTEGRATION: Language and script. (In its Report, New Delhi, Ministry of Education, 1962. 47-61, 142-3).

The choice of the country's official language will be reflected in the education imparted in schools and colleges. Knowledge of a common Indian language is necessary, besides mother tongue or regional language, for national integration. Hindi is suitable for this purpose. Hindi may be learnt in non-Hindi areas in the regional script, but at the high school stage Devanagari script should be used. A three-language formula has been suggested taking two factors into consideration: 1) language for emotional and national integration; and 2) educational purpose. The suggested formula is: A. Primary 1) Standards I-V-(i) compulsory study of mother tongue or regional language which is also the medium of instruction (ii) optional study of another Indian language or English or preferably Hindi in non-Hindi areas. 2) Standards VI-VIII: Hindi areas - (i) regional language or mother tongue, (ii) another modern Indian language other than (i) or a classical language, (iii) English or Hindi if English is studied under (i). Non-Hindi areas - (i) regional language or mother tongue or a combined course of classical language and regional language or mother tongue, (ii) Hindi, (iii) English or regional language if English is studied under (i) B. Secondary: Standards IX-X: Hindi areas - (i) mother tongue or regional language, (ii) English, (iii) modern Indian language other than (i), or a classical or foreign language. Non-Hindi areas: (i) regional language or mother tongue, (ii) English or Hindi, (iii) modern Indian or foreign language other than (i), or Sanskrit or a classical languages. C. Higher Secondary and its equivalents: 1) University preparatory group: Hindi areas two languages from: (i) modern Indian language other than Hindi, (ii) English or a modern foreign language, (iii) a classical language. Non-Hindi areas: i) Hindi, ii) a modern Indian language other than the medium of instruction, and iii) English. 2) Vocational or semi-vocational groups: Hindi areas: Hindi as medium of instruction, compulsory study of English or another language (Indian or foreign) depending on the type of occupation. Non-Hindi areas: regional language as medium of instruction, and compulsory study of English or Hindi or another language (Indian or foreign) depending on the type of occupation.

A23 INDIA. COMMITTEE ON EMOTIONAL INTEGRATION: University education. (In its Report. New Delhi, Ministry of Education, 1962. 79-94, 147-51).

The use of Indian languages as the medium of instruction in the highest stage of education is a matter of profound importance for national integration, as it will bridge the gap between the intellectual elite and the mass of the people. However safeguards should be devised to prevent the lowering of standards. The change-over to the regional language must be preceded by preparation of textbooks and arrangements for translation from English and from other modern languages. In order to maintain inter-University and inter-State communication, special attention must be paid to the teaching of link languages, Hindi and English. When the change-over to regional language is accomplished, special efforts should be made to forge links between universities in different parts of the country, or else, wide gaps will be created not only between universities but also between different States. For purely intellectual purposes students in universities should have a good knowledge of English so that they can express themselves with facility.

A24 INDIA. NATIONAL INTEGRATION COUNCIL: Proceedings of the first meeting held at New Delhi on 2 and 3 June 1962. (In India. Commissioner for Linguistic Minorities. Fifth report. New Delhi, Ministry of Home Affairs, Government of India, 1963. 153-5).

The Council considered the report of the Committee headed by Dr. Sampurnanand to study the problem relating to the place of English, Hindi and the regional languages in university education, with particular reference to the need for the preservation of a link language between the Universities and the teaching of English as a language of international importance for the enrichment of the Indian languages in science and technology. As regards the medium of instruction conclusions did not differ materially from those of the Chief Ministers' Conference (see abstract no. A20) which were also approved by the Emotional Integration Committee. The implementation of these proposals should however be guided only by academic consideration. Regional languages should be employed as media of instruction to facilitate communication between the masses, the artisans and technicians and the university men. Development of talents would also be retarded unless regional languages are used as media at the university stage. Replacement of English in universities should be made after careful preparation and without lowering the quality of education. The Council also stressed the importance of teaching English as a compulsory subject. English would remain as an international link at all times. At the university stage, students should be equipped with a progressively better command of Hindi in addition to a good working knowledge of English. Universities should permit the use of Hindi or English as an optional to the regional language in examinations.

A25 INDIA. PRIME MINISTER, 1947-63 (Jawaharlal Nehru): Address at Vice-Chancellor's conference. Education Quarterly 1962, 14(56), 231-5.

On the question of the medium of instruction it has been suggested that the change-over to regional languages should be staggered and during the transition period both English and the regional language should be used. Some subjects may be taught in English while regional languages may be used for teaching other subjects. It should be ensured that education should not suffer during the change-over. The need for learning foreign languages, specially English, has also been stressed. In learning a foreign language the object would be to understand scientific topics and to appreciate literary work. Languages play a very important part in maintaining contacts with other parts of the world. Of all the foreign languages, inevitably English is likely to suit India better, though study of other languages should also be encouraged.

A26 INDIA. LAWS, STATUTES, ETC.: Official Languages Act, 1963. (Act No: 19 of 1963). (In India. Laws, Statutes, etc. Acts of Parliament, 1963 with a table showing the effect of legislation and an index. Delhi, Manager of publications, 1964. 159-61).

The Act provides for: 1) continuation of the English language for official purposes of the Union and for use in Parliament even after the expiration of the period of 15 years from the commencement of the Constitution (as provided in Art. 343 of the Constitution) [Section 3]; 2) constitution of a Parliamentary Committee after the expiration of 10 years from the date on which Section 3 comes into force, to review the progress made in the use of Hindi for official purposes of the Union and submit a report to the President. [Section 4]; 3) authorized Hindi translation of Central Acts etc. [Section 6]; 4) authorized Hindi translation of State Acts etc. in case any language other than Hindi is used [Section 6]; 5) optional use of Hindi or other official languages in judgements etc. of the High Courts [Section 7].

A27 INDIA. PRIME MINISTER, 1947-63 (Jawahar Lal Nehru): Official language (Speech in Lok Sabha during debate on the Official Language Bill, 24 April 1963). (In Jawaharlal Nehru's speeches, September 1957 - April 1963. Vol. 4. Delhi, Publications Division, Ministry of Information & Broadcasting, 1964. 64-8).

During the debate on the Bill (see abstract no. A26) sought to remove the restriction on the use of English beyond 1965, following observations were made: 1) no major change in regard to the use of English would be made without the consent and approval of the non-Hindi-speaking people; 2) any other regional languages is as much an Indian language as Hindi; 3) in the sphere of national languages, only national languages have a place, and not English; 4) the growth of India, in the sense of language, can only take place by the cooperation of these languages; 5) only Hindi can be the link language for official use; 6) English should continue as link language between individual thinkers, literary men and authors; 7) English should continue to be used for higher scientific and technological studies although at school national languages should be used in teaching for better understanding and appreciation of the subject; 8) because of the inadequacy of Hindi for administrative work, English should continue as an associate language; 9) change-over to Hindi should be a gradual process and fixation of date has very little significance except to review the progress.

A28 INDIA. STATE EDUCATION MINISTERS' CONFERENCE: Minutes of the decisions of the Three-language Formula Implementation Committee. (In its Proceedings. New Delhi, Ministry of Education, 1964. 110-12).

In accordance with the recommendation of the Sixth State Education Ministers' Conference held in October 1962, the Committee was set up to review the progress made in implementing the formula. In its meeting held on 15 and 16 April 1963 Committee agreed that while certain variations to suit local conditions and circumstances were unavoidable, the formula should be so implemented in the States as to secure the largest measure of uniformity in regard to: 1) place of the languages in the school curriculum; 2) selection of languages other than mother tongue or regional language for inclusion in curriculum, and 3) standard of proficiency to be aimed at. The decisions of Madras Government to make Hindi an examination subject and of the U.P. Government to make English a compulsory subject to study at the school stage and to make increasingly greater provision for teaching other modern Indian languages in addition to Sanskrit in the school curriculum, were appreciated. The Committee emphasized that at the school stage, at least three languages should be taught and the teaching of a language should be provided for not less than three years in a continuous course. The Committee recommends that: 1) States should take early steps to conform to the three-language formula; 2) in Hindi-speaking States third language should be one of the modern Indian languages. Provision for the teaching of a classical language need not be in lieu of a modern Indian language but may be as part of a composite course or as an elective.

INDIA. EDUCATION COMMISSION: Evolution of a language policy. (In Report of the Education Commission (1964-66) - education and national development. Delhi, Manager of publications, 1966. 13-16, 291-3, 613-14. 649).

[See abstract no. 273, Indian Educational Material Vol. 1, No. 1]

INDIA. EDUCATION COMMISSION: Languages. (In Report of the Education Commission (1964-66) - educational and national development. New Delhi, Manager of publications, 1966. 191-7, 635-6).

[See abstract no. 301, Indian Educational Material Vol. 1, No. 1].

A29 INDIA. MINISTRY OF EDUCATION. Study Group on the Teaching of English (1964-65). English as medium of instruction and as second language - a historical review. (In its report - Study of English in India. New Delhi, Manager of publications, 1967. 5-16, 63-5).

Regionalization of the medium of instruction should be achieved in most of the universities by 1975 and the following phased programme is suggested: 1) allowing candidates to answer examination papers in the regional language; 2) allowing college teachers to teach either through English or the regional medium; 3) regionalizing the medium should be done simultaneously all over the country; 4) production of adequate number of textbooks in regional languages. In order to preserve the mobility of students and teachers, English and Hindi should be taught so intensively that students can follow lectures in these languages with ease. Students should also be encouraged to study one regional language other than the mother tongue. A review of the implementation of the three-language formula shows that it has been misapplied in different ways in the States. The record of non-Hindi areas regarding the study of Hindi is unsatisfactory. The Hindi-speaking areas did not adhere to the principle involved in the formula. The controversy on the position of Hindi and English in the curriculum necessitates the modification of the formula in such a way that only two languages are studied compulsorily in the middle school stage. The third language should be postponed to the high school and higher secondary stages. Since English is likely to continue as an associate official language the study of it should be encouraged.

A30 INDIA. MINISTRY OF EDUCATION: Study Group on the Teaching of English (1964-65). Programme for teaching English in schools. (In its report - Study of English in India. New Delhi, Manager of publications, 1967. 17-26, 66-70).

A modified three-language formula has been suggested: A. Primary: 1) classes I-IV - compulsory study of mother tongue or regional language which is also the medium of instruction; 2) classes V-VII - i) mother tongue or regional language; ii) for non-Hindi-speaking areas English or Hindi, and for Hindi-speaking areas English or Hindi if English is the mother tongue. B. Secondary: classes VIII-X- i) mother tongue or regional language; ii) English (or Hindi in Hindi-speaking areas if English is the mother tongue), iii) Hindi or a modern Indian language other than Hindi in Hindi-speaking areas. C. Higher secondary or Pre-university: 1) university preparatory group - as in B above; 2) vocational or semi-vocational groups - mother tongue or regional language will be the medium of instruction for these groups but it may not be a subject of study. There will be compulsory study of English or Hindi or any other modern European or Indian language, depending on the type of occupation to be followed. Other points discussed are: 1) desirable level of attainment in English; and 2) objectives of the lower and higher level of courses in English at the higher secondary stage.

A31 INDIA. MINISTRY OF EDUCATION: Study Group on the Teaching of English (1964-65). Teaching of English in Colleges. (In its report - Study of English in India, New Delhi, Manager of publications, 1967. 27-35, 71-2, 201-25).

Compulsory English should be taught throughout the three-year degree course, for six periods a week during the first two years and for three periods a week during the third year. The course should consist of: 1) a paper on skills through texts; 2) another on skills without texts, and 3) a half paper in summary and translation. Specimen syllabi in compulsory English course both for the lower and higher levels are given in Appendices 6 and 7. The regionalization of the medium of instruction at university level would necessitate the teaching of the literature in English on various subjects. The higher level course is aimed at training the future English teachers of secondary schools. Teaching under both the subsidiary and principal courses in English at the M.A. stage should mainly be conducted through preceptorials and tutorials. Apart from a common core of literature, the M.A. course should contain an optional section consisting of the history of the English language, a statement of the problems involved in the teaching of English as a second language, and a discussion of more advanced topics in the phonetics of English, and in structural linguistics with special reference to English. It is necessary to recognize the distinction between the language aspect and the literature aspect of English. In future, the departments of English should be largely language-oriented. There is considerable need for research on the problems arising from the teaching of English in India.

A32 INDIA. MINISTRY OF EDUCATION. Study Group on the Teaching of English. (1964-65). Three-language formula in States ... (In its report - Study of English in India. New Delhi, Manager of publications, 1967. 81-2).

Presents a statement on the pattern of implementation of three-language formula in States (excepting Bihar and Madras). The first language is invariably the regional language. The position of English is as follows: 1) as third language: (a) Andhra Pradesh - compulsory from class III; (b) Gujarat - compulsory from class VIII to X; (c) Jammu & Kashmir - compulsory from class VI (in some cases from class V; (e) Punjab - compulsory from class VI.; 2) as second language (a) Assam - compulsory from class IV, (b) Kerala - compulsory from class III, (c) Orissa - compulsory from class IV, (d) Rajasthan - compulsory from class VI, (e) Uttar Pradesh - compulsory from class VI and optional in selected primary schools; (f) West Bengal - compulsory from class III, (g) Mysore - compulsory from class V. In Madhya Pradesh English is not taught. In non-Hindi areas Hindi is taught either as second or third language. In Mysore study of Hindi is compulsory but marks are not considered in declaring the result. Rajasthan and Uttar Pradesh provide for the study of languages of other regions as third language.

A33 CONFERENCE OF VICE-CHANCELLORS, New Delhi, September 11-13, 1967: Statement adopted / on medium of instruction / Science & Culture 1967, 33(10), 424-5.

A change-over of the medium of instruction to regional languages could only be considered as an integral part of the policy aimed at improving the standard of education, promoting creativity and national integration, and bringing education closer to the needs and aspirations of the community. If this change-over could be properly carried out it would be a major step towards the improvement of higher education and towards strengthening its roots in Indian soil. The manner and speed of the change-over should, however, be left to university system. At the undergraduate stage the change-over could be carried through in about 5 to 10 years depending upon the preparatory work already done, the nature of the subject and other related factors. In programme of change-over the place of English should not be undermined. At the postgraduate and research stages, the question of medium has very little significance since the students will have to depend mostly on literature in English and other important foreign languages. In the case of all-India institutions the present arrangements should continue. In cities with multi-lingual population, the medium of education should continue to be English, in addition to the regional languages which the university would provide.

A34 INDIA. COMMITTEE OF MEMBERS OF PARLIAMENT ON EDUCATION (1967): Adoption of Indian languages as media of instruction at all stages. (In its report - National policy on education. New Delhi, Ministry of Education, Government of India, 1967, 2-3).

A proper language policy is needed for strengthening national unity. The key programme is to develop Indian languages and to adopt them as media of education at all stages. The change-over should be brought about in five years. In implementing this reform, the following important points should be considered: 1) all-India institutions should use Hindi and English as media of education, having regard to the needs of students. Adequate provisions should be made to ensure that students educated through any Indian language are not at a disadvantage; 2) the work of devising scientific and technical terminology should be expeditiously completed. This terminology should be adopted/adapted in all Indian languages; 3) students who have been educated through the medium of Indian languages should not be deprived of opportunities of good employment. Adoption of Indian languages for all administrative purposes in the States and their use in the UPSC examinations are suggested; 4) adequate safeguards should be provided for linguistic minorities; 5) a large-scale programme should be adopted for the production of the necessary literature in all Indian languages within five years; 6) suitable safeguards should be devised to prevent any lowering of standards during the process of change-over.

A35 INDIA. COMMITTEE OF MEMBERS OF PARLIAMENT ON EDUCATION: Hindi - the link language. (In its report - National policy on education. New Delhi, Ministry of Education, 1967. 4).

In practice, Hindi is already largely in use as a link language for the country. The educational system should contribute to the acceleration of this process in order to facilitate the mobility of students and teachers and to strengthen national unity. The special emphasis on the study of Hindi is also justified on account of the fact that it will become the sole official language in the future when the non-Hindiareas accept it as such. It is also recognized as one of the official languages of UNESCO, signifying its importance as one of the major languages of wide dissemination in the world.

A36 INDIA. COMMITTEE OF MEMBERS OF PARLIAMENT ON EDUCATION: Sanskrit. (In its report - National policy on education. New Delhi, Ministry of Education, 1967. 4).

Since India has a special responsibility for the promotion of Sanskrit, facilities for its teaching at the school stage should be provided on a liberal scale and its study encouraged. Where possible, composite courses of Sanskrit and the regional languages should be provided. Wide study of Sanskrit at the collegiate stage should also be planned and new methods of teaching should be evolved to enable college students to acquire an adequate and quick command of language, even though they may not have studied it at school. Universities should also examine the desirability of including a study of Sanskrit in those courses at the first and second degree where such knowledge is essential (e.g., courses in certain modern Indian languages, ancient Indian history, Indology, Indian philosophy). The traditional system of Sanskrit learning should be encouraged.

A37 INDIA. COMMITTEE OF MEMBERS OF PARLIAMENT ON EDUCATION: Teaching of languages. (In it's report - National policy on education. New Delhi, Ministry of Education, 1967, 3-4).

For the teaching of languages, the following principles should be kept in view: 1) the parent has a right to claim primary education in the mother tongue of his child; 2) at the secondary stage, the regional language should ordinarily be the medium of education; 3) adequate safeguards should be provided for linguistic minorities. Languages to be studied at various stages are: classes I-X: only the medium of instruction should ordinarily be studied in the first sub-stage of school education covering four or five years. The study of regional language when it does not happen to be medium of education should be on an optional basis. A second language should be introduced, on a compulsory basis, ordinarily at the beginning of the next sub-stage and should be continued till the end of class X. This may preferably be a language included in Schedule VIII of the Constitution, or English or any other language. A third language on an optional basis may be studied from class VIII. But in case a pupil has not studied either Hindi or English in the earlier classes, he shall be under an obligation to study one of these languages at this sub-stage. However, it is desirable that before he completes his school education, a pupil should acquire some knowledge of three languages - regional language/mother tongue, Hindi, and English or any other language. Classes XI-XII: a pupil shall study at least one language of his choice in addition to the medium of education; University Stage: while facilities to study languages on an optional basis should be adequately provided at the university stage, the study of any language should not be made compulsory unless it is an essential part of a prescribed course.

A38 INDIA. MINISTER OF EDUCATION, 1967- . (T Sen): Concluding remarks at the Tenth Conference of State Education Ministers [28-30 April 1967]. Teachers' Journal 1967, 46(5), 102A-102D.

The discussions on the language policy have been summed up. It has been agreed that the three-language formula should be viewed from two considerations: 1) the child should not be over-burdened with language study, and 2) the need to strengthen national integration and unity. Another area of agreement is the order of priority of studying three languages: 1) mother tongue; 2) the official or the link language and 3) one of the library languages, the most important of which is English. But difficulties arise in deciding the compulsory study of Hindi on the one hand and English on the other. It has been emphasized that the growth of Hindi would be rapid and eventually it would be suitable as a link language. At the same time the study of English should be also continued. Agreement on two other points are: 1) the three-language formula is not being implemented properly, and 2) greater consideration should be given to the motivation of the child in learning the language. The main point of disagreement is the determination of the languages for compulsory study and the stages when they should begin.

A39 INDIA. MINISTER OF EDUCATION, 1967- . (T. Sen): Education at all stages through Indian languages [statement in the Lok Sabha on 19 July 1967]. Maharashtra Educational Journal 1967, 15(12), 302-3; Hindu 20 July 1967. p.7. Cols. 2-4.

The first proposal to adopt Indian languages as media of instruction at the university stage was mooted by the British Indian Association of the North Western Provinces (now Uttar Pradesh) in a memorandum submitted to the Governor General on Ist August, 1867. Both Gandhi and Rabindranath also strongly advocated the use of mother tongue as the medium. That there had been growing demand for change-over to the regional languages after independence, would be evident from the recommendations of various Commissions, Committees and Conferences: 1) University Education Commission (1948-49); 2) National Integration Council (1962); 3) Committee on Emotional Integration (1962); the Vice-chancellors Conference (1962) which generally endorsed the recommendations of 2 and 3 above; 4) Education Commission (1964-66); 5) Tenth Conference of State Education Ministers (1967); 6) Committee of Members of Parliament on Education (1967). In view of this academic and public opinion, the Government of India had accepted in principle that the Indian languages should now be adopted as media of instruction at all stages and in all subjects. This is necessary for: 1) realizing the creative energies of the people; 2) improving standards of education; 3) spreading knowledge to the people; and 4) bridging the gulf between the intelligentsia and the masses.

A40 INDIA. LAWS, STATUTES, ETC.: Official Language (Amendment) Act, 1967. Hindu 17 December 1967. p.12, Cols. 3-5. 920 words.

Section 3 of the Official Languages Act 1963 (see abstract A26) was amended on 16 December, 1967. The main provisions of the amended Act are: English shall continue to be used in addition to Hindi even after the expiration of the period of 15 years from the commencement of the Constitution for official purposes of the Union as detailed in the Act and for transaction of business in the Parliament. The Act further provides that correspondence in English is obligatory between the Union and a non-Hindi speaking State and that Hindi-speaking States communicating with non-Hindi speaking States shall have to send an English translation, should they chose to use Hindi. The Central Government shall ensure that employees of Union Government having proficiency either in Hindi or in English may function effectively. Use of English for various purposes as provided in the Act would not be discontinued until such time the Legislatures of the States which have not adopted Hindi as their official language pass resolutions for discontinuance and a similar resolution is adopted in both Houses of Parliament.

A41 INDIA. MINISTRY OF EDUCATION: Three-language with load adjustment. Amrita Bazar Patrika 6 May 1967. p.1, Cols. 4-5, p.7, Cols. 1-2.

The proposed adjustment ensures that no two new languages are introduced simultaneously: Classes I-IV - (i) mother tongue or regional language only; Classes V-VII - (i) mother tongue or regional language, (ii) English or any other modern Indian language or Sanskrit in Hindi areas. In non-Hindi areas, Hindi or English. Classes VIII-X - (i) mother tongue or regional language, (ii) Hindi area - same choice as in class V-VII, but the student should take a language that he did not study in those classes. In non-Hindi area - Hindi or English which was not studied in classes V-VII, (iii) study on optional basis the language studied in classes V-VII. The proposal had been made taking education, financial political and administrative aspects into consideration. It had been found that while the non-Hindi speaking States had done something for the implementation of three-language formula, the Hindi-speaking States had done nothing in this respect. As regards the script, the Ministry preferred the two scripts for three languages suggested by Dr V K R V Rao. This means that instead of Devanagari, the script of the mother tongue may be used in studying Hindi.

A42 INDIA. PARLIAMENT: [Resolution on language policy adopted in the Parliament on 16 December, 1967]. Hindu 17 December 1967, p.12, Col. 5. 550 words.

A more intensive and comprehensive programme would be adopted for the spread and development of Hindi and its progressive use for various official purposes. An annual assessment report in this respect would be presented in Parliament and sent to all State Governments. Efforts would be made in collaboration with the State Governments for the co-ordinated development of all languages included in the 8th Schedule of the Constitution. Effective steps should be taken for the proper implementation of the three-language formula in all States.

Arrangements should be made in accordance with that formula for the study of: 1) a modern Indian language (preferably one of the Southern languages) 2) Hindi, and 3) English in the Hindi-speaking areas, and of: 1) Hindi, 2) regional language, and 3) English in the non-Hindi-speaking areas. Compulsory knowledge of either Hindi or English shall be required for selection of candidates in the Central Services. All languages included in the Constitution and English would be introduced as alternative media for the all-India and other Central Service examinations after ascertaining the views of the Union Public Service Commission.

A43 INDIA. STATE EDUCATION MINISTERS CONFERENCE, 10TH (1967): Language issue. Asian Recorder 1967, 13(20), 7697-8.

The Conference could not arrive at an agreed solution on the teaching of languages at the school stage or on the three-language formula. Most of the States favoured a two-language formula. It was, however, agreed that regional languages should be the medium of instruction in all institutions of higher education. A nine-man committee consisting of the Educational Ministers of Maharashtra, Madras, Gujarat, Haryana, West Bengal, Andhra Pradesh, Madhya Pradesh, Bihar and Delhi was appointed to find out which languages should be taught at the school stage.